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ABSTRACT

The member states in Asia and the Pacific region participating in the Asia and Pacific Programme of Educational Innovation for Development (APEID) initiated an effort to restructure secondary education. During its fifth programming cycle (1992-1996), the APEID continues its focus on restructuring secondary education. Consequently, the UNESCO Principal Regional Office for Asia and the Pacific (PROAP) and its Asian Centre of Educational Innovation for Development (ACEID) met in Thailand to assess the state of secondary education and make recommendations for the future. The first of four chapters in this report describes the state-of-the-art of secondary education, including the APEID initiative and major reforms and concerns in the region. Improving the quality of secondary education is the subject of chapter 2 and working toward implementation of reform of secondary education at the threshold of the 21st century is discussed in chapter 3. Chapter 4 covers regional and national action for 1992-96. Appendices A-F include gross enrollment ratios at the second level of education, duration of compulsory education, structure of school education, gross enrollment ratios at the tertiary level of education for 1986-88, and a case study. Annexes I-IV include an agenda, addresses, list of participants, and members of working groups. (JPT)

APEID

for Development

Report of a Regional Meeting on the State-of-the-Art of Secondary Education

UNESCO

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TOWARDS NEW SCHEMES OF SECONDARY EDUCATION

**Report of a Regional Meeting
on the State-of-the-Art
of Secondary Education**

Surat Thani, Thailand
19 - 26 August 1991

UNESCO PRINCIPAL REGIONAL OFFICE
FOR ASIA AND THE PACIFIC
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TABLE OF CONTENTS

INTRODUCTION

Background

The Member States in Asia and the Pacific region which are participating in the Asia and Pacific Programme of Educational Innovation for Development (APEID) have identified major programme areas for action under APEID during its fourth programming cycle (1987-1991). One of these areas is "Restructuring secondary education".

Several regional and national activities have accordingly been undertaken in close collaboration with the Member States and their APEID Associated Centres, focusing on themes such as data on secondary education; an appraisal study on balance and relevance of the content; diversification and vocationalization; access and equity; effectiveness; modernizing the teaching-learning process; and raising the quality of learning of secondary school students.

In view of the activities already initiated by APEID, and the fact that for APEID's fifth programming cycle (1992-1996) the Member States have again decided to make secondary education one of the major areas of action, the UNESCO Principal Regional Office for Asia and the Pacific (PROAP) and its Asian Centre of Educational Innovation for Development (ACEID) considered it timely and useful to undertake a review of the current situation of secondary education, as well as to co-operatively prepare alternative designs of secondary education for the future.

Consequently, UNESCO PROAP/ACEID, in co-operation with the Department of General Education, Ministry of Education, Thailand, convened an APEID Regional Meeting to Assess the State-of-the-Art of Secondary Education, which took place at Surat Thani Province, Thailand, from 19-26 August 1991.

The terms of reference of the Meeting were:

1. to assess achievements in the reorientation and reform of secondary education;

2. to ascertain the state-of-the-art of the APEID Joint Innovative Project on Raising the Quality of Learning of Secondary School Students; and

3. to co-operatively prepare alternative designs of secondary education for human resource development.

The agenda of the Meeting is at Annex I.

Prior to the Meeting, a Technical Working Group met at UNESCO PROAP, Bangkok, from 13 to 16 August 1991, to assist the Secretariat in the preparation of a working paper entitled "Towards New Schemes of Secondary Education at the Threshold of the Twenty-First Century".

Participation

Altogether 14 participants attended the Meeting, coming from 12 Member States, namely, China, Indonesia, Iran, Malaysia, Mongolia, Nepal, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Socialist Republic of Viet Nam, and Thailand. In addition, the Department of General Education, Thailand, sent 13 senior officials responsible for secondary education as observers of the Meeting.

The Secretariat was assisted by three resource persons from India, Japan and New Zealand, viz., Dr. T.N. Dhar, Mr. Nabuya Higuchi and Ms. Edna Tait respectively.

The list of participants is at Annex III.

Opening session

After an introductory statement and expression of thanks to the co-host, the organizing committee and the Governor and people of Surat Thani Province, by Mr. Leonardo de la Cruz, Head of ACEID, Dr. Kowit Vorapipatana, Director-General, Department of General Education, Thailand, addressed the Meeting. He expressed his pleasure at UNESCO PROAP having decided to organize a meeting to assess the situation of secondary education in the region. He informed the Meeting of what he had observed about secondary education in Thailand. His major concern, included, for example, teachers and schools not recognizing the potential of secondary school students; the secondary school system forcing students to do nothing but devote most of their time to the study of books, thereby being unable to cope with real-life situations and problems; parents sacrificing so much to give education to their children for a number of years, during which these children did not earn anything to help supplement the family income; frustration experienced by secondary school graduates when they could not find jobs or could not continue on to become doctors, engineers, etc. Dr. Kowit expressed his deep concern that these young boys and girls, who were at an age when they were creative, dynamic and ready to participate in community development, were being kept within the four walls of a classroom until all their creativity and initiative were stifled, instead of giving them opportunities to be useful to their families, communities and nations. He, therefore, welcomed the opportunity afforded by this Meeting for dedicated educators to come together and co-operatively prepare concrete action plans for implementation, rather than resort to a theoretical or academic exercise.

His Excellency the Governor of Surat Thani Province, Mr. Anu Sanguannam, welcomed the participants to his province. He gave a description, with a video presentation, of the physical and cultural features of the province, as well as a briefing on the educational scenario of Surat Thani, stressing that the educational philosophy adopted is that education is student-centred, relevant to the community, traditions and cultures of the country.

Mr. Hedayat Ahmed, Director of UNESCO PROAP, indicated to the participants that the Meeting was all embracing of the second level of education, a weak chain linking primary and tertiary education. Enrolment at the secondary stage has increased substantially. Furthermore, basic education is gradually being extended to cover the lower secondary level in many countries of the region. Access, equity, quality and relevance are major problems to be tackled. In the developing countries, secondary education has been blamed for not being able to adequately prepare the youth for life, particularly those for whom the second level of education is the final stage of formal schooling. Consequently, it has contributed to all the social and moral ills. The social and economic returns of secondary education will continue to be dismal if countries do not invest in the qualitative improvement of secondary schools and in making their programmes relevant for the society. In this respect, there are encouraging signs of reduced expenditures on armaments, enabling countries to re-channel their resources to various development sectors. The time may have come to analyse the "ailments" plaguing secondary education, and jointly develop innovative and alternative second-level education schemes. However, ad hoc or piecemeal remedies would not be effective. A more massive system-wide reform may be required, to ensure that secondary education can contribute optimally to human resource development. For this, a vision for a "renaissance of secondary education" is called for.

The full texts of the three addresses are at Annex II.

Officers of the Meeting

The Meeting unanimously elected Mr. Banchong Pongsastra (Thailand) as Chairperson; Dr. M.A. Bhatti (Pakistan) and Dr. Desideria Rex (Philippines) as Vice-Chairpersons; and Mr. John Maela (Papua New Guinea) as Rapporteur. The Secretaries of the Meeting were Mr. Leonardo de la Cruz and Ms. Charatsri Vajrabhaya, UNESCO PROAP/ACEID.

Working methods of the Meeting

There were group sessions. The participants were divided into two groups, A and B, chaired by Dr. M.A. Bhatti (Pakistan) and Dr. Desideria Rex (Philippines), with Mr. Gopi Nath Sharma (Nepal) and Mr. Tan Poh Boo (Malaysia) as Group Rapporteurs, respectively.

The Meeting held 6 plenary sessions and 3 group sessions. The names of the members of the two working groups are in Annex IV.

The draft report was considered at the final plenary session, and was adopted with modifications to be incorporated in the final report.

Field visits

The Organizing Committee of the Department of General Education, Bangkok, and the Local Organizing Committee, the members of which appear in Annex III, organized field visits to four secondary schools:

- Pabonphittayakom Secondary School, Phatthalung Province
- Phatthalung School, Phatthalung Province

- Donsalanum Wittaya School, Phatthalung Province
- Kanchanadit School, Surat Thani Province.

In addition, visits were arranged to observe local industries and places of interest in Surat Thani Province.

Acknowledgements

The Meeting placed on record its sincere thanks for and appreciation of the warm hospitality, courtesy and full co-operation rendered to the participants, resource persons, observers and members of the Secretariat by the Governors of Surat Thani and Phatthalung Provinces, the Director-General, the Deputy Director-General and officials of the Department of General Education who formed the Organizing Committee, the Local Organizing Committee in Surat Thani, the local officials and School Directors and Principals in Surat Thani and Phatthalung Provinces.

CHAPTER ONE:

STATE-OF-THE-ART OF SECONDARY EDUCATION

I. Introduction

Significance of secondary education

1. While the strategic importance of secondary education in the education system has been recognized, it continues to remain the "weakest link in the chain". Of late, however, the significance of this stage has come to be recognized, and efforts at restructuring it have been made. Some of the reasons which account for the significance of secondary education include:

a) It is a link in the educational chain, linking primary education with tertiary education. Any weakness in the link is likely to have an adverse impact on both. What is done at the secondary stage has substantial repercussions on what can be done at the first and third levels. In many countries of the region, the teaching force for primary schools is recruited from graduates of the second level. The academic preparation that has characterized their stay in secondary schools determines, to a large extent, the kind of intellectual stimulation that they can provide to primary school children. On the other hand, the academic preparation of these graduates sets limits to what tertiary-level institutions can do to provide a challenging educational environment for them.

b) The stage forms a transition:

i) between basic education which is common, undifferentiated and regarded as the minimum level to be achieved by all and more specialized education at the third level to be made available for those who are capable of profiting from it;

ii) between education and life, since many of the students - in some countries, the large majority - who enter the secondary stage want to or are "compelled" by various reasons to settle down in life after secondary schooling;

iii) between childhood when individual needs are looked after by others and adulthood when one has to more or less fend for himself/herself, the in between period characterized by many physical and emotional strains and stresses and adjustment problems.

c) The secondary stage is, in most of the developing countries, the main supplier of middle-level skilled manpower, including teachers for primary schools without whom universal availability of primary education cannot be ensured. The reform of secondary

education, with emphasis on skills training of prospective school leavers, is often in response to the economy's need for such manpower, apart from the important need to prevent the young from joining the large pool of unemployed school leavers. In developing countries particularly, secondary schools must, therefore, train students for existing occupations. Many of the occupations require skills which will not undergo radical transformation in the context of the present state of economic development.

2. The concern for improvement of secondary education has been worldwide and not confined only to the region. In December 1986, the International Bureau of Education, Geneva, convened an International Conference devoted to secondary education. The Conference reviewed major trends and the state of international co-operation in secondary education and made recommendations on the structure of secondary education, its content, methods and materials, the implications of new information and communication technologies, educational and vocational guidance, measures to prevent repetitions and failures, and international co-operation. 1/

3. The Jakarta Plan of Human Resources Development in the ESCAP Region has recommended the upgrading of secondary and higher education. It has recommended a widening of access to all qualified candidates, and emphasized the need for improving the quality of education. It has suggested the revision of curricula, review and improvement of methods of teacher training for the secondary stage, and the need for making vocational and technical training relevant to current and prospective employment conditions. 2/

II. APEID Initiative

4. In view of the significance of the secondary stage, APEID has, in collaboration with Member States, taken a number of initiatives for the reorientation and reform of secondary education. As early as 1984, APEID organized a meeting of a task force (26-31 July 1984) in Jakarta on the theme: In Search of New Models of Secondary Education. 3/ The meeting was attended by representatives of Australia, India, Indonesia, Japan, Republic of Korea and Thailand. The main areas discussed were:

a) major trends and issues in various countries which included restructuring, social relevance, curriculum modernization, linking of education with productivity, human resources development and planning and management of the system;

b) innovative models being implemented and the preparation of a framework for appraising them;

c) joint studies;

d) plan for future action.

5. The Fourth Programming Cycle of APEID (1987-1991) identified restructuring of secondary education as a major thrust area for national and regional action. In fact, except perhaps for universalization of primary education, all other thrust areas identified in the Programming Cycle have significant contributions to make to the quality of secondary education. They include: Education for Promotion of Scientific and Technological Competence and Creativity; Education and Work; Education for Rural Development; Educational Technology with Stress on Mass Media and Low-Cost Instructional Materials; Professional Support Services and Training of Educational Personnel; and Co-operative Studies and Innovative Projects of Research-based Requirements Related to Educational Development.

6. Pursuant to the incorporation of restructuring of secondary education as a major thrust area in the Fourth Programming Cycle, a series of actions were taken at both the regional level as well as at the level of Member States. These are discussed briefly.

7. Three workshops were organized by ACEID in collaboration with the National Institute for Educational Research (NIER), Japan. The first regional workshop, held from 17 June to 10 July 1986, felt the need for data on the status of secondary education in the region. "It was hoped that through the collective endeavour of the participants in the forthcoming series of workshops, a rich resource will be developed which would form a basis for subsequent innovation and reform in secondary education in the region." A questionnaire seeking information on organization, enrolment, curriculum, teacher preparation and assessment was designed and circulated to the Member States The second and third workshops, organized respectively from 17 November to 8 December 1987 and from 23 May to 8 June 1988, were devoted to the analysis of data and 'editing' of the draft report before its final publication. The NIER's report was brought out in December 1988. 4/ The report provides information on the status of secondary education in 16 countries of the Asia-Pacific region: Australia, China, India, Indonesia, Japan, Malaysia, Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Samoa, Singapore, Sri Lanka and Thailand.

8. The meeting of a Study Group, 5/ comprising representatives from Afghanistan, Australia, Bangladesh, China, India, Indonesia, Japan, Maldives, Malaysia, Nepal, New Zealand, Pakistan, Philippines, Republic of Korea, Samoa, Sri Lanka, Viet Nam, Thailand and Turkey was held from 9 to 17 May 1988. The input for the meeting consisted of the information from countries which had been invited to produce an "Appraisal Study" on Reorientation and Reform of Secondary Education. The four major areas covered were: major issues and problems confronting secondary education today; innovations and reforms currently under way or planned; the current education situation; and future prospects. ACEID had commissioned thematic papers on matters known to be "at the forefront of UNESCO's programmes", viz., balance and relevance of the content, diversification and vocationalization, access and equality, effectiveness, standards and management and modernizing the teaching-learning process. A draft report synthesizing the experiences of various countries was commissioned and considered in the Study Group Meeting. 6/

9. In addition to reviewing the regional situation, the Study Group outlined a broad framework for future regional actions, prepared a list of follow-up national training workshops and suggested guidelines for a Joint Innovative Project on raising the quality of learning of secondary school students. Many of the countries have since organized national workshops on various themes (See Appendix A). 7/ As regards the Joint Innovative Project, Bangladesh, China, Iran, Mongolia, Nepal, Pakistan, Philippines and Viet Nam have agreed to participate; preliminary reports have been received from all countries except Mongolia and Bangladesh. 8/

10. The Twelfth Regional Consultation Meeting (RCM) on the Asia and Pacific Programme of Educational Innovation for Development 9/, held on 20-27 August 1990, identified Reorientation and Qualitative Improvement of Secondary Education as a major area for APEID programming and action. The meeting noted that "education of five or six years will not be enough to cope with the demands of the twenty-first century". It further stated: "Coupled with the realization is the social pressure to widen the access to the second level of education. Attention, therefore, needs to be focused on the second level of education through formal and non-formal mechanisms and its capacity to provide practical, relevant and useful education that will assist young people meet the demands of the twenty-first century." 10/

11. The different areas identified by the RCM for national and regional action are: national-level educational assessment/evaluation programmes with regional co-ordination; educational reform initiatives (relative to new developments in curricula, skills development, enterprise education and examination reforms); creative methods and alternative structures for quality secondary education (including teacher education); school-based innovations leading to qualitative changes; education and work experience responsive to national needs; non-formal education, including community and adult education; distance education; innovative programmes for promoting morals, ethics and values; education for nurturing talent; co-operative action-oriented research on reorientation and qualitative improvement of secondary education. 11/

12. The RCM's two other areas for action, i.e., education of the disadvantaged and science and technology education, have also implications for expansion and qualitative improvement of secondary education. The Work Plan of APEID for the Fifth Programming Cycle 1992-1996 12/ has identified the specific actions required in each of the areas listed above, the mechanisms of implementation, monitoring and evaluation and modes of regional collaboration.

13. The Advisory Committee on Regional Co-operation in Education in Asia and the Pacific, at its sixth session which was held in Chiang Rai, Thailand, from 6 to 10 May 1991, discussed the question of "reform of secondary education at length, especially relevant for those countries which had achieved UPE". The Committee recommended that UNESCO should "assist Member States in launching systems reform and qualitative improvement of secondary education in order to enable it to contribute much more to human resource development". It also stressed the need for UNESCO to assist in seeking extra-budgetary resources. 13/

III. Regional Situation: Major Reforms and Main Concerns

14. The status of secondary education in the Member States of the region presented in the report is based on:

a) the study of the National Institute for Educational Research, Japan, prepared on the basis of a survey conducted with the participation of 16 countries;

b) the synthesis report commissioned by APEID for the Study Group Meeting;

c) the reports of the national workshops organized by Member States in pursuance of the recommendations of the Study Group (Appendix A);

d) country papers presented at the Meeting;

e) verbal presentations made by participants.

15. The many reforms of secondary education proposed by Member States will, no doubt, require considerable time to get incorporated in the system. The lack of resources, in most countries of the region, and the fear of disrupting the system to the disadvantage of currently enrolled students, are probably the important reasons why the changes attempted cannot be radical. There appears, however, a growing realization that secondary education should be seen in its totality and, instead of piecemeal changes, an attempt should be made to bring about a systems change.

16. The situation in the Member States of the region is discussed in relation to some of the concerns which have been exercising the minds of education policy makers and those who are expected to ensure that policies get implemented. These issues seem to revolve around:

- Access and equity;
- Distance education;
- Balance and overload;
- Relevance;
- Special education;
- Diversification and vocationalization;
- Teacher preparation;
- Assessment and evaluation;
- Management and administration;
- Research and feedback.

Access and equity

17. The enrolment at the secondary stage has, in the countries of the region, increased substantially in the last two decades. Between 1960 and 1980, the percentage increase was almost 300. Between 1970 and 1982, enrolment increased by 153 million. The factors contributing mainly to

enrolment increases have been:

a) an overall growth in population, leading to the augmentation of the pool of young women and men seeking entry to educational institutions;

b) the pressure from below, resulting from approaching universal access to education at the first level;

c) pressures for opening of new institutions in and for hitherto neglected areas and groups, such as rural areas, girls, disadvantaged segments;

d) the realization that education received at the first level by a student is inadequate for him/her to function effectively in a complex world;

e) the need to increase the supply of secondary school graduates for recruitment to teaching positions in primary education;

f) the need for manpower, both high-level and middle-level, the former necessitating the expansion of secondary education to increase the pool of fresh entrants to tertiary-level institutions, and the latter requiring expansion of the intake of vocational courses at the secondary stage.

18. At times, the justification for expanding secondary education facilities is sought in terms of its economic and social returns. Some studies have indicated that these returns in developing countries are low compared to the first level of education. This is also true of the third level of education. Three points need to be considered in this context. Firstly, in spite of the low rates of return, the expansion of the second and third levels of education has to continue to accommodate the new aspirants who are completing the first level of education. Secondly, it can be assumed that the technological upgradation of occupations, however slight it may be in some countries, will require on the part of workers more than the first four or five years of primary education. Lastly, no matter what the rate of return studies show, countries do make provisions for the expansion of educational facilities, even if it is to accommodate pressures from the newly influential groups. Political parties in democracies can ignore pressures only at the risk of being voted out of power. In their response to public pressures, the governments of developing countries are no different from their counterparts in developed ones.

19. Despite the progress in regard to access, most countries of the Asia-Pacific region continue to have low enrolments at the second level of education relative to the population in the age group. The table at Appendix A indicates the proportion of the relevant age group enrolled at the second level of education in countries of the region. The countries fall broadly into four major groups as is illustrated below:
pa

Table 1: Proportion of the age-group population enrolled at the second level

Proportion enrolled at the second level of education (In percentage)	Countries
i) Below 20	Afghanistan, Bangladesh, Bhutan, Pakistan, Papua New Guinea
ii) 20 - 40	India, Lao PDR, Myanmar, Nepal, Thailand
iii) 40 - 60	China, Fiji, Indonesia, Iran, Malaysia, Viet Nam
iv) 60 - 80	Philippines, Sri Lanka, Turkey
v) 80 or above	Australia, Japan, New Zealand, Republic of Korea

The statistics, as indicated in the Appendix, are from the UNESCO Statistical Yearbook, 1989. Enrolment ratios are generally lower in the case of girls. For instance, while in Iran the overall ratio is 40 per cent and for boys 57 per cent, for girls it is 39 per cent. In some countries, like Afghanistan, Bhutan, Pakistan and Papua New Guinea, less than 12 per cent of the girls are enrolled.

20. In view of the varying duration of secondary education and the age of entry to it, the statistical data presented in the table at Appendix B need to be interpreted with great caution. The duration of "compulsory" education varies in the countries of the region, ranging from five years in Bangladesh, Iran, Lao PDR, Myanmar, Nepal and Viet Nam to 10 years in Australia, Democratic Republic of Korea, New Zealand and USSR (See Appendix B). It must also be noted that in many countries of the region, the regulations regarding compulsory education are not enforced and, therefore, even at the first level, all the children are not enrolled. The proportions indicated for the Member States of the region are 4 to 5 years old and do not represent the current situation. Appendix C gives the structure of school education of the countries in the Asia and Pacific region. This position has changed in some countries.

21. There are considerable variations in transition rates from the first level to the second level of education, and in the rates of children dropping out at each level. The data presented in the NIER study illustrate (Table 2):

Table 2: Transition and drop-out rates at secondary stage 14/
(In percentage)

Countries	Transition Rates		Completion Rates	
	From primary/ elementary to lower secondary	From lower secondary to upper secondary	Lower/ junior secondary	Upper/ senior secondary
Australia	92.7	84.6	94.0*	50.3*
China	1.2	42.3	78.0	86.2
Indonesia	63.0	82.9	73.0	72.0
Japan	99.9	92.0	99.9	92.8
Malaysia	86.2	63.1	95.4	94.5
New Zealand	100	88.0	97.0**	78.0**
Pakistan	85.9	75.0	72.9	47.6
Papua New Guinea	37.0	9.1	68.9	95.9
Republic of Korea	99.6	89.2	97.1	92.7
Samoa	85.7	40.0	79.0	23.0
Singapore	86.0	99.9	99.0	99.0
Sri Lanka	92.1	91.2	71.1	90.4
Thailand	40.0	85.6	91.9	86.5

* For Grade 11
** For Grade 12

22. A number of reasons have been indicated to account for the drop-out of students from the secondary stage without completing it. In China, the three common reasons are: withdrawal from school of a child by parents who assume that he/she will not gain entry to the university and, therefore, no purpose will be served to continue him/her in school; the condition of junior secondary classes to which are generally assigned less competent teachers who fail to motivate children for education and for consistent effort; and the need for children to participate in family work. In New Zealand, the reasons indicated are: inappropriate curriculum, particularly for non-academic subjects; lack of flexibility in school programmes which do not take into account individual differences; regularly recurring experience of failures which proves to be demotivating; lack of sensitivity on the part of teachers and institutions to the needs of minority groups; and the cultural and economic disadvantages from which some students suffer.

23. It would seem that unlike the first level, the problems of repetition and dropout have not been studied at the second level extensively and in depth. The main emphasis in studies seems to have been the large-scale failures that occur in some countries in the public examinations which are held at the end of the lower and secondary stages of education. There is a need for in-depth case studies of repetition and drop-out rates, as the issue is not merely of determining as to what can be done in schools to prevent early withdrawals, but also what can be done with those who, in spite of schools' effort, will drop out.

Distance education

24. Resource constraints continue to prevent many countries from opening new institutions. In addition, in most of the developing countries, the aspirants for secondary education find it difficult to forego earning possibilities by entering regular and full-time education. Alternative delivery mechanisms are consequently being experimented with. In India, a number of states and the Central Board of Secondary Education have set up open schools for students, providing education through correspondence courses. Supportive material is broadcast and telecast on radio, television and special transmission through the national satellite. In Indonesia, the primary school facilities are used for secondary education of students after school hours. The 'open secondary schools' use modular materials, radio broadcasts and community resources. Indonesia has plans to extend basic education from six years to nine years; "the open secondary schools are seen as a promising mechanism" in that context. In Pakistan, the Allama Iqbal Open University provides further education through correspondence, supported by radio broadcasts for graduates of primary and lower secondary stages. In Papua New Guinea the College of External Studies attempts to provide "education for those who are unable to continue their studies through the formal system". Working people, desirous of further education, are thus enabled to upgrade their qualifications without having to quit their work.

Balance and overload

25. The curricula of secondary schools have in most countries been extensively revised in response to advances in science and technology, speedier means of information processing, new national priorities and such national and global concerns as unchecked population growth, environmental degradation and pollution, depletion of non-renewable resources, deforestation and its effect on ecology and human life, drug abuse, etc. The revisions have included both updating of knowledge as well as inclusion of new subjects. Computer literacy and computer application have become important elements of the secondary stage curriculum, although in some countries the facilities provided are in a limited number of schools (due to lack of resources to purchase hardware). With the increasing concern with moral and ethical issues, the curricula also provide for humanistic, moral/ethical and cultural values, as independent subjects or integrated into other subjects. In some countries, religious education has been incorporated as an important objective of secondary school education. The concern for promoting national identity and the preservation of indigenous cultures including those of distinct ethnic groups has also prompted Member States to incorporate suitable subjects/contents in the curriculum.

26. In some countries such as Viet Nam, China and Mongolia, provision is being made for the teaching of additional languages. In Viet Nam, apart from French and English, which are being taught, facilities for teaching Japanese and Chinese are being created in response to increased investments from these countries and for expanding the market for Vietnamese goods. In China, many foreign languages are being taught. In Mongolia, the Mongolian language, with its distinct and indigenous alphabet, is being re-introduced as a compulsory language and would be mandatory at all levels from 1994,

along with history and culture of the Mongolian people. The implications of students having to learn an additional language and the urgency of preparation and production of instructional materials are quite obvious. In the Philippines, values education as a required subject has been introduced at the secondary stage.

27. In the context of updating/revision of curricula, the concern for overloaded secondary school syllabus has grown. The major issues seem to be:

a) what should be included in the curriculum of the secondary stage?

b) what weight should be given to different subjects?

c) in what form should various disciplines be presented?

28. The NIER study pointed out that "Curriculum load is a source of concern in most countries, but its nature and extent varies". There has always been a tendency to incorporate as much content as possible. This has been mainly due to two reasons. Firstly, the desire to provide an all-round education, coupled with an inadequate emphasis on teaching methods which would enable students to learn how to learn, seems to have led to an overloaded curriculum at the secondary stage. Secondly, secondary education being the terminal stage for many, there is pressure to provide as much knowledge (or information) as possible to the young so that they can squarely face and cope up with problems and challenges of a complex world. In most countries, unfortunately, addition of the new content and/or "new" subjects may not be accompanied by weeding out of materials which are no longer important, a major reason being the entry requirements of the university which demand on the part of secondary school graduates a more "complete" education.

29. Among the other reasons for "overloaded" curricula, the following seem important:

a) a regular addition to the content in the light of advances in knowledge, particularly under pressure from tertiary-level institutions, demanding a more adequate preparation on the part of school graduates;

b) failure to weed out what, in view of recent developments, has become redundant;

c) inability and/or failure to integrate significant elements of the newly emerging concerns (environmental pollution, drug abuse, etc.) in the existing subjects/content;

d) the traditional approach to the teaching learning process which emphasizes the role of the teacher as the only purveyor of knowledge.

30. In China, "the curricular load is very heavy on students" who have to study each term 11 subjects in each grade of the junior middle school. The government has now instructed schools "not to put a harmful emphasis on extending students to reach a larger level". In Indonesia, a student has to study 12 to 13 subjects in grade 1 of the general secondary school, 13 subjects in grade 2, and 10-11 subjects in grade 3. In a recent workshop, a plea was made to give serious consideration to the issues of "overlapping in curriculum content" and the reduction of the number of subjects that a student has to study. In India, complaints have been heard about the overloaded secondary school curriculum and the students having to carry heavy school bags on their backs. Coupled with this is the complaint that schools, in order to complete the requirements of the syllabus, assign too much homework to students, leaving them with little time for sports, recreation and leisure time activities. In Viet Nam, the "present educational contents" are seen to be overloaded for both students and teachers. They are "overcounted by 10 figures": moral, labour, hygiene, military, physical, intellectual, vocational, management, environmental population, transport, communication. In Japan, the realization that all learning cannot take place in educational institutions and, therefore, schools should be responsible primarily for fundamentals, and should be avenues for life-long learning. This has resulted in the reduction of students' workloads by 10 per cent at lower secondary students and by 6 per cent at upper secondary stage. In Mongolia, vocational and technical skills are learned in depth in the Young Technician's Palace and not in the schools.

31. The growing competition for entry into institutions of higher learning has led to the tendency on the part of many secondary schools to provide "more adequate" education to students. Not only is teaching often tailored to the admission requirements of universities, but often there is premature specialization in preferred subjects. This has led to the distortion of the objectives of secondary education, apart from promoting unhealthy competitions (and tensions) among students. In the Republic of Korea, "the quality of education is believed to consist in the number of successful applicants that a high school sends to prestigious universities. There emerges a fierce competition among students for obtaining this label. Students are gripped by the fear of what will result from failure to make higher grades and schools become a field of competition for survival". In Japan, the competition for gaining entry to more prestigious universities has become fierce. Further, "there has been a study which shows an increase in those students who cannot absorb the enlarged content and thus are troubled with the inability to adjust".

32. All countries where curriculum load is a source of concern have modified or are in the process of modifying their curricula. These revisions include limiting subject contents to basics, integrating subjects and the simplification of subject matter to suit a particular grade. In Thailand, the curriculum revision effected in 1990 had, among other things, the following objectives:

"a) Letting the curricula be leaders in developing the teaching-learning process which emphasizes training the students to be able to think, to solve problems, to work, to develop one's

work, and to have good or acceptable attitude;

b) Letting the curricula promote the management of education in such a way as to be relevant and conducive to the improvement of the quality of life and socio-economic conditions of the localities;

c) Letting the curricula encourage school administrators and teachers to be able to provide education which responds to the needs of students, parents/guardians, and the localities, and enhancing aptitudes and abilities of each individual student to the fullest of his/her potential."

In Japan, it is felt that "the idea of completeness in the content of compulsory education has to be changed".

33. There are no specific guiding principles for determining the weightage to be given to different subjects. The factors that probably determine the relative weightage include:

a) the perceptions of those who are responsible for framing the curriculum (such as the content of moral/ethical education);

b) the facilities available for teaching particular subjects (for instance, teachers and laboratories for effective teaching of sciences);

c) the perceived educational solutions to social and economic problems (such as work experience/productive work, etc.);

d) the over-emphasis on cognitive learning which in many countries requires acquiring and testing of "encyclopaedic" knowledge;

e) the perceived need for electives to cater to individual differences;

f) lack of research inputs to determine what a curriculum should consist of (for instance, information on how a curriculum is actually transacted).

34. Efforts have often been made to reduce the number of subjects by, among other things, integrating various disciplines. Illustrative of these are social studies, incorporating elements of geography, history and civics; and integrated science which incorporates biology, chemistry, and physics. These efforts have mainly been to "rationalize" curriculum at the lower secondary stage. The upper stage curriculum continues, in most cases, to be discipline-oriented, in relation to the requirements of tertiary education for specialization.

Relevance

35. In many countries, particularly those which had a colonial past, the concern for making education relevant to national needs is even now voiced,

although most of these countries gained independence from the colonial powers three to four decades ago and had, therefore, enough time to restructure their education systems to subserve national needs more adequately. Attempts were no doubt made to "reform" the system, but in the compulsions of expanding it, necessitated by the democratization of polity and "explosion of expectations", resources for reform and improvement have never been enough. Furthermore, the rewards available in society - for educational preparation based on non-indigenous models - have tended to exert inexorable pressures to maintain the present status. This is no doubt more true of tertiary-level institutions; but because of the influence that they exercise through their entry requirements, second-level education has also found it difficult to be radically reformed.

36. The goals and objectives of education, albeit secondary education, are often stated in national Constitutions, reports of commissions, developmental plans and policy documents on education. Most of the statements are general in nature and lack specificity which is essential for effecting a meaningful change in the education system or its sub-systems. The interpretation of "prescribed" goals and objectives and their precise connotation for educational action - for instance, in terms of curriculum content, management structures, etc. - is therefore done by educational experts to the best of their ability and in the light of the perception of what education should lead to in terms of individual or collective competencies.

37. The question of relevance has tended to raise the questions of "for whom" education should be relevant, and "who decides" what is relevant for an individual or a group of people. While the democratic principle advocates the provision of educational services in relation to the needs and potential of individuals, the perceived manpower requirements of the economy may exert a contrary influence and require a more uniform set of courses. The needs of the polity for promoting national identity and integrity, particularly in countries with many ethnic and religious groups, also determine what programmes will become the main educational foci for adolescents who, on leaving the portals of a secondary school, have to perform the roles of citizens. The influence of the media - promoting an "alien" culture has also led to an emphasis in the curriculum on indigenous traditions and culture as well as humanistic, moral and ethical values. The incorporation of content on these and other similar concerns no doubt stems from the educators' belief that what is taught in classrooms gets automatically translated in student behaviour outside the classroom. The apparent conflict between values taught in the classroom and values practised outside is generally not taken note of.

38. The question of providing education in relation to individual differences remains at best a theoretical one in most countries, particularly in those where resources are not enough even to provide minimum essential facilities for an effective teaching-learning process. Even the "cafeteria" approach to the provision of courses at the second level of education in some countries with adequate resources for education - enabling students to make choices from a wide range of courses - has come in for criticism, since it can lead sometimes to a situation where the sole criterion for education becomes an easy passage without students seeking an

adequate grounding even in the "basics". The countries of the region do, no doubt, make an effort to cater to individual differences through electives. However, for want of material and human resources and lack of an adequate number of students for some courses (which increases the per capita cost), the number of electives provided is generally limited. This is true both of "general" courses as those of vocational training. In the case of the latter, often a grouping of students takes place, both for general education as well as for instruction in common elements cutting across a number of vocational training courses for many occupational areas.

39. Apart from being concerned with individuals and groups, the relevance of education is also relative to time. What is seen today to be relevant might not have been perceived to be significant a few years back. The "return to basics" and the need to promote humanistic, moral/ethical and cultural values are illustrative of educational ideas acquiring currency in the wake of social, economic and political developments. In many countries, the emphasis might change in the light of changes in political regimes and/or ideological shifts. The bandwagon effect in educational aims, objectives and practices is probably due to inadequate research in many countries into what children learn or can learn and how they learn.

40. In the light of the desire to make well-rounded individuals, lower secondary education seems to have become general in character, with emphasis on a core programme of studies. Quite remarkably, the content of the core part of the secondary school curriculum seems to be becoming similar in many countries of the region, despite the differences in language and culture, economic and political systems and national ideologies. Apart from the usual subjects - languages, mathematics, general science and social science, art and music, etc., - the core programme is tending to concern itself with major global issues like environmental pollution, drug abuse, protection and more rational use of natural resources, and so on.

41. In some countries, however, students have to take vocational subjects. In Papua New Guinea, apart from core subjects of English, mathematics, sciences and social sciences, students have to choose from non-core subjects like home economics, agriculture, practical skills, expressive arts, etc. In Pakistan, students have to choose as one of the electives a vocational subject at the lower secondary stage. In Indonesia, optional subjects are offered at the lower secondary stage. In Iran, all students have to pass a vocational subject at the lower secondary stage as part of general education.

Special education

42. An area which has been neglected so far and has begun to receive attention now is that of special education. Although special education should be concerned with the education of all categories requiring special attention and facilities, for want of resources, both material and manpower, the needs of only two categories seem to be considered at this stage - the disabled and the talented. As regards the disabled, the trend is towards their mainstreaming and/or integration in the regular primary

or secondary schools. For those who are severely disabled, specialized institutionalized care and rehabilitation have been set up . A special aspect of educational programming which needs attention is that of assisting the disabled (who appear different) to make emotional adjustment , and others to accept the disabled whole-heartedly.

43. The other category is that of the talented. While it is recognized that talent manifests itself in a number of directions, the education departments find it possible to cater to the needs generally of only those who are gifted academically. Some provision is, of course, made for those who show promise in other activities like music, painting, sports, and so on. The major question generally asked is whether the "gifted" should be "educated" with other children, or whether special institutional arrangements should be made for them. The countries of the region seem to have experimented with both. While special institutions have been established for the gifted, an effort has simultaneously been made to provide in "normal" schools an accelerated programme for them. In a few countries, gifted and talented students are exempted from vocational courses. It would be worthwhile to study the effectiveness of these two modes. The other question is that of an early selection of the gifted. Many countries of the region have tried out a number of methods. The most significant effort is probably that made in India, where the talent search examination tests, through a variety of means, thousands of students, identifies the most talented and provides scholarships to them till they complete doctoral or other advanced level professional studies.

Diversification and vocationalization

44. The diversification/vocationalization of secondary education is, in fact, a response to the need to make secondary education relevant to society's development needs. The two issues generally discussed in relation to vocational training are:

a) At what stage should job-specific vocational courses be introduced?

b) What should be the degree of specificity in training?

45. It must be recognized that secondary education is terminal for the large majority. This is illustrated by the very low enrolment ratios at the tertiary level of education. The table at Appendix D provides the data. The enrolment ratios range between a low of 0.3 in Bhutan to a high of 49 in the Democratic Republic of Korea and Republic of Korea for males, and 0.1 in Bhutan to 40.3 in Philippines for females. In a majority of the countries the enrolment ratio is less than 10, even for males. Even in developed countries - Japan, Republic of Korea, Australia and New Zealand, less than half of the young men are enrolled in tertiary-level institutions. Tertiary-level admissions in most countries are determined by the number of available places in institutions of higher learning which are substantially less than the number of secondary school graduates who seek entry to them. Consequently, the competition for entry into third-level institutions is tough, often leading to disastrous consequences for those who fail in their attempts to gain entry.

46. These issues are raised in relation to secondary education which is managed and operated by the education departments. There already exist vocational training courses, geared to specific requirements of jobs, which are under the control of other departments, like industry, labour and employment, agriculture, health, etc. For instance, the industrial training institutes in India which are under the control of the Department of Labour provide job-specific vocational training in a host of engineering and non-engineering trades. These institutes admit students whose ages range between 14 and 18, i.e., the age range usually covered by the secondary education system. In some countries of the region, like China and Viet Nam, vocational training institutions catering to the needs of students exist as parallel to the general lower and secondary schools. Further, as indicated earlier, in some countries of the region vocational courses are provided as elective subjects even at the lower secondary stage.

47. In many countries of the region, provisions have been made for vocational training of students entering secondary education. In India, bifurcation of students into general and vocational streams takes place at plus two stage of secondary education (grades XI and XII). In China a "wide variety of electives is offered which includes traditional areas of study and vocational education but includes, in addition, such subjects as photography, journalism, aesthetics, special sporting activities". Electives are available only in three-year junior middle schools. The upper secondary curriculum in Indonesia offers "vocational/technical tracks", where 60 per cent of the time is devoted to practice of skills. Nepal provides for choice of such electives, in grades IX and X, as home science, office management and accounts, agriculture, industrial education, religious rites and education. In New Zealand, electives are available for students in forms 3 through 7. Generally, three to four hours a week are assigned for electives. Pakistan provides for vocational courses at all the three stages of secondary education: lower secondary (grades 6-8), secondary (grades 9-10) and higher secondary (grades 11-12). In the Republic of Korea, students have to select two electives at the upper secondary stage - one from industry technology and home economics, and the other from agriculture, engineering, commerce, marine and fisheries and domestic affairs. In Maldives, fisheries science has been introduced as a subject at the lower secondary stage with the purpose of providing to students basic knowledge of marine ecology and fisheries. A number of commerce-based subjects were also introduced in 1986. While some form of vocational training is part of the lower secondary stage in some countries, the general trend seems to be to postpone it to the upper secondary level. In Papua New Guinea, "practical projects have formed the basis of teaching and learning strategy to make secondary education relevant to the needs of the students and the country". The programmes, which are part of the lower secondary school curriculum include: gardening, marketing, poultry, trade, store, furniture making, canoe making, net making and fishing, etc.

48. In Iran, where the secondary stage starts from the age of 15, after nine years of pre-primary (1 year), elementary (5 years) and guidance schools (3 years), the curriculum is divided into two major fields, viz., theoretical and technical-vocational. The former comprises three branches of mathematics/physics, experimental sciences and literature and humanistic

sciences. The technical-vocational stream is also divided into three branches: technical, agricultural and vocational. Students are channelled into one of the three branches. Technical-vocational education is offered in technical schools where no fees are charged. Of the total enrolment of students in secondary schools, 12.7 per cent are in technical-vocational courses. By completing credits, students opting for technical-vocational courses can expect to enter institutions of higher learning in their chosen options. In Malaysia, three categories of elective subjects are offered at the upper secondary stage, viz. humanities, vocational and technological courses, and science. A number of options are available in the category of vocational and technological courses. These include: accounting, commerce, agricultural science - home economics, civil, mechanical and electrical and electronics engineering, engineering drawing, etc. In Viet Nam, vocational training in the new secondary education system is proposed to be provided in technical and vocational secondary schools. The lower and upper secondary schools will aim at providing students "technical knowledge and vocational skills to enter labour life", when they are not able to continue further education.

49. While many countries of the region would like to make increased provision for vocational training of students, the constraint of resources prevents most of them from doing so. Vocational courses are more expensive to provide. For instance, in Pakistan "it has not been possible to completely break away from the past and to achieve diversification of secondary education". "At the higher secondary level nearly 2/3 enrolment is in the field of arts and humanities". Although an effort was made to introduce agro-technical subjects at the secondary level, all schools could not make provision for them since "vocationalization and offering agro-technical subjects require huge financial and manpower resources". Consequently, agro-technical subjects could be introduced in only 200 schools.

50. There seems to be a general veering towards the idea that specific vocational training should be postponed to the upper secondary stage, i.e., grades 11-13, and the lower secondary stage should aim at providing general vocational skills to students rather than skills relevant to a specific job. The main reason for such advocacy seems to be the result of the radical changes that the world has witnessed in recent decades. It is stressed that the present-day world requires, on the part of the young, flexibility and adaptability to change, and that a general education - wider in scope and of some depth - can promote among students the capabilities to adjust to change and make meaningful adaptations when required.

51. Educational planners in most developing countries have been concerned with the employability of school leavers and school dropouts. The question asked is how and what competencies can be developed among students so that they become productive members of their communities, rather than remain marginalized. The country reports, presented in the Meeting, indicated considerable concern with the lack of useful skills and other associated competencies on the part of those young persons who drop out prematurely from school or discontinue education after a certain stage. Secondary schools in many developing countries are, therefore, under pressure to

prepare students for the world of work.

52. The question of specific vocational training being provided as part of secondary education is often discussed in relation to training becoming redundant in the context of scientific and technological changes. For instance, the status report on reorientation and reform of secondary education in the Asia and Pacific region (PROAP, 1989) states:

> "On face value, the need to provide an educated work force should lead to the conclusion that pre-work, vocational education is desirable - and many countries are increasing their vocational education provisions. However, vocational education that is too specific has in the past proved to have flaws, in that techniques change, jobs disappear (in the face of technology), and narrow specialists have difficulty in both finding jobs and reorienting their skills when job opportunities are no longer there. Often it seems that the best vocational education is a general education which allows scope for adaptability in the light of (new) job contexts." 15/

53. This might be true of highly industrialized countries of the region where the nature of jobs and skill requirements for them undergo rapid change. Consequently, the nature of educational preparation has to be such that workers have generalized competencies required for adaptability to change. In the developing countries of the region, however, the nature of jobs, particularly those in rural areas, have remained largely unchanged. There seems, therefore, to be a case for specific training for specific jobs. Of course, requirements for new skills have emerged, for instance in the wake of farm mechanization. Furthermore, as was pointed out in the Conference organized by the International Bureau of Education, Geneva, the considerations of flexibility and lateral and vertical academic mobility have often, led to the negation of the very reform that vocationalization of education was expected to bring about. The report of the Conference observed that "the academic mobility aspect built into some systems of vocational education resulted in the entry of many of its graduates into higher education rather than into the work force. This, it was said, had a negative effect on the availability of skilled manpower, on the one hand, and built up pressure on higher education, on the other". The "generalized" vocational training might be used as an alternative route for entry into higher education by those school graduates who could not initially gain entry into some preferred courses at the tertiary level. Such a development leads to a waste of resources invested in the training of the young for jobs.

54. A view could be advocated that, in view of the general trend to extend compulsory education to the lower secondary education, the possibilities of promoting flexibility and adaptability among students have increased and, therefore, the case against specific skill training was not that strong as is made out to be. A good deal will no doubt depend upon the content of education and, more specifically, the methodologies adopted for an effective teaching-learning process. Vocational courses, while tailored to specific occupations or to occupational groups, could be such

as to ensure that students are able to respond to changes with the minimum amount of reorientation training. The elements of such vocational training could be:

i) General education, with emphasis on science, mathematics, information technology, communication skills, cultural awareness and global concerns;

ii) Basic theoretical framework of vocational training;

iii) Exposure to work through practical training in the institution;

iv) In-plant/in-enterprise training through apprenticeship, temporary placement, industry institution collaborative mechanisms, etc.;

v) Vocational guidance.

Teachers' preparation

55. The NIER study has provided data on the proportion of trained and female teachers in the sixteen countries of the region that were surveyed (see table below):

Table 3: Proportion of trained and female teachers 16/

Country	Proportion of trained teachers	Proportion of female teachers
Australia	100.0	50.5
China	80.0	28.1
India	91.0	30.0
Japan	99.7	26.8
Malaysia	96.8	48.0
Nepal	46.3	9.4
New Zealand	77.3	42.7
Pakistan	83.5	33.3
Papua New Guinea	99.9	32.9
Philippines	100.0	75.0
Republic of Korea	99.1	30.3
Singapore	95.2	58.9
Sri Lanka	83.9	61.5
Thailand	87.1*	57.2*

* In government schools.

Imbalances in the availability of teachers exist. Generally, rural and disadvantaged areas find it difficult to attract and retain qualified and able teachers for teaching positions in secondary schools. In some countries of the region, there are shortages of science, mathematics and vocational teachers.

56. The NIER study also indicates the existence in secondary schools of underqualified teachers. While a bachelor's degree plus a professional degree are prescribed for teachers of secondary schools, in some countries of the region non-graduates continue to teach in secondary schools, mostly at the lower secondary level. The percentage of non-graduate teachers ranged from a low of 9.7 in the Republic of Korea to a high of 99.5 in Western Samoa. The percentages for different countries were : China - 72.9, India - 10.0, Japan - 23.3, Nepal - 88.7, Pakistan - 75.4, Papua New Guinea - 99.0, Republic of Korea - 9.7, Thailand - 56.4 and Western Samoa - 99.5.17/ There is, however, an increasing trend in the countries of the region to recruit graduates and post-graduates for teaching positions in secondary schools. Likewise, in a few countries, attempts are being made to attract talented young people into the teaching profession.

57. In a number of countries, there is a concern about the quality of teacher preparation. In some countries, teacher training institutions are unmindful of the new competencies required of teachers arising from curricular reforms. For instance, the national seminar on reorientation and reform of secondary education held in Pakistan stressed the need for updating and revising the curriculum of professional courses for secondary school teachers. The seminar on the same subject held in Bangladesh identified the major weaknesses in teacher preparation to be "(a) weak practice teaching; (b) poor quality of trainees; (c) mechanical teaching methods and inadequate evaluation procedures; (d) unsatisfactory teacher-student ratio; (e) teaching of courses by non-specialized teachers". In Nepal, the "teachers' level of competency has not taken a trend towards improvement", while earlier a teacher was expected to have received training before entering the profession, this requirement has now been waived. The lack of systematic arrangements for in-service and retraining of teachers is also an area which is causing concern, particularly for effective delivery of new curricular materials.

58. School-based in-service training and linking of schools are being increasingly used to upgrade teachers of secondary schools. In Philippines, Sri Lanka and India, for instance, schools have been grouped into complexes/clusters for sharing of resources and guidance and in-service training of teachers. In the Philippines "all teachers are being trained by year level and by subject area during the long summer vacation in selected Regional Leader Schools by selected trainers trained in Centres of Excellence (6 in number)".

Assessment/evaluation

59. The NIER study has analysed the situation in respect of objectives and practices prescribed/followed in selected countries of the region. The information has been presented in relation to:

- assessment of students;
- assessment of teachers and principals;
- assessment of schools.

In addition to discussing the nature of assessment practices, the study highlights some of the major concerns in these countries. The survey has

found a commonality of objectives for student assessment. These generally include measurement of the effectiveness of the teaching-learning process, students' level of achievement and their relative standing vis-a-vis each other, information needed for student guidance, evaluation of the relevance of curriculum, monitoring of national standards and the extent to which national goals are being achieved.

60. In most countries of the region, public examinations remain a major tool for measuring student performance in various subjects. There are, however, variations in grade/year at which they are held by national, state or provincial levels. Generally, the public examination is held at the end of the lower and upper secondary stages. In some countries, public examinations are controlled and administered by External Examining Boards, which sometimes do not take cognizance of curricular changes, thus impeding full implementation of the reforms. To obviate such a problem, in Japan and Thailand, no public examinations are held. A sample testing of students is carried out in these two grades by a team of national assessors. In Malaysia, under a new scheme of examination, history, geography, living skills and Islamic studies are assessed by school teachers and the marks obtained by students shown in the certificate issued on the basis of public examination. In New Zealand, the University Entrance Qualification as the main terminal qualification for secondary school leavers was abolished in 1986. This structural reform was "expected to reduce the universities' dominance of the secondary education curriculum and free schools to become more enterprising and their curricula to be more balanced and relevant".

61. In many countries, the public examinations at the end of the lower and upper secondary stages have come in for severe criticism on many counts. They are seen to have distorted the basic objectives of education since performance at the examination - in the form of high grades, credits or marks - has become the major goals for students, teachers and schools. In some countries, a large proportion - in some cases over 50 per cent - of students fail to pass the public examination, get demotivated for education and become unemployed/unemployable school leavers. The report from the Republic of Korea states:

> "As teachers gear educational programmes to preparing for examinations, rote-learning and memorization dominate classroom instruction. They naturally focus on drills on subject matter to be contained in the examinations to the virtual exclusion of reasoning, and critical thinking. Extra lessons carry youngsters through grinding work well into the night. All of these are designed to cram into the head fragmentary knowledge which is likely to be included in the examination. Amid primary concern for the volume of information retained, teachers lose sight of the inherent goal of education. Education of the whole person can no longer find its place in the curriculum. No opportunities are provided to nurture moral quality and aesthetic sensitivity. Extra-curricular activities are given little treatment, and hours set aside for home room are far from providing a significant degree of exposure to

inter-personal contacts."

62. Assessment of schools is generally done in the countries of the region by school inspectors during their visits to schools. The report prepared by an inspector is made available to schools for remedial action/improvement of school programmes and practices. "School assessment", states the NIER study, "has not be systematically carried out in many of the participating countries, though it is a positive way of establishing whether schools are effective institutions of learning and teaching, whether educational goals are being achieved, and whether assistance for school improvement is required".

63. The NIER study has identified a number of weaknesses in the existing assessment practices. These include:

a) "In many of the participating countries, the principal objective of the formative assessment of students, which is to measure effectiveness of the teaching-learning process, has not been given sufficient importance and attention at the school level.."

b) Teachers do not seem to be making adequate use of information for remedial teaching, for reteaching and for review of teaching strategies and approaches.

c) Assessment of student behaviour tends "to be subjective, based on the expectations and perceptions of various teachers".

d) Although the importance of affective and psycho-motor domains is recognized, assessment gives attention mainly to the cognitive aspect of student performance.

e) While some form of teacher assessment takes place in some countries, "little attention is given to the developmental objectives of teacher assessment". Assessment of teachers is generally subjective, with criteria of assessment not well-defined.

f) While all countries have procedures for it, school assessment is "not systematically carried out". Only a few countries meet both the accountability and developmental objective criteria of school assessment.

Management and administration

64. There are variations regarding the authority which has been invested with the power to take decisions on goals and objectives, structure, curriculum, teaching materials and textbooks, assessment procedures, etc., of secondary education. In some cases decisions are taken by the national governments or institutions designated by them, while in others the responsibilities are vested with provincial, local or school committees/councils. While in some, the regulations of the central authority are prescriptive, in others they are in the nature of broad guidelines. In China, for instance, "the State Education Commission has

the responsibility for the curriculum, for the syllabus, the teaching programmes and the apportionment of hours to each subject". Furthermore, all "textbooks must be examined and approved by the National Committee for Accreditation of Teaching Materials for Schools before publication and before being used in schools". In Australia, on the other hand, the "majority of important decisions are made at the school level" on the basis of guidelines set out by the Minister. In the Republic of Korea, the Central Ministry determines "the basic directions for all educational management and provides guidelines for its subsequent implementation". In India, on the other hand, while the central and state governments take policy decisions, the semi-autonomous State Boards of School/Secondary Education determine and prescribe the curriculum, textbooks and other instructional materials for secondary schools. In Nepal, the curriculum and textbooks prepared by the Curriculum, Textbook and Supervision Development Centre of the Ministry of Education are "scrutinized by the Supervision Committee of policy-level personnel and finally approved by the Co-ordination Committee chaired by the Minister". In India, the National Council of Educational Research and Training prepares a curriculum framework and model textbooks for the guidance of state-level education authorities.

65. It would seem that barring a few countries like Australia and New Zealand, the management and administration of secondary education is primarily the prerogative of the central and/or state governments. The structure, curriculum, instructional materials are centrally decided upon, with teachers and schools taking very little part. In the context of enhancing the relevance of secondary schools to communities, greater share and autonomy in decision making has been advocated. In Thailand, many secondary schools are being given more autonomy and are involving the community, as exemplified by Pabonphittayakom School, Donsalanum Wittaya School in Phatthalung Province; and Kanchanadit School in Surat Thani. In India, for instance, a few schools with a strong academic reputation are in the process of being designated as autonomous schools for the purposes of curriculum preparation, selection of instructional materials, assessment practices, supervision of teachers work, etc. The other measure suggested for the schools to reflect community interests is greater involvement of the neighbouring communities with the affairs of the school. Parent-teacher associations, school-committees, etc., are illustrations of these.

66. New modalities for "supervising and guiding" the work of schools and improving the teaching-learning process are being experimented with in some countries. Schools are being linked to each other for mutual support. The school complexes of India and the cluster schools of Sri Lanka and Thailand are illustrative of these innovative practices. Such linking of schools helps in the sharing of resources and the improvement of teachers' competencies through in-service training organized in the complex or cluster. They are also useful as mechanisms for supervision of schools. In many countries, pace-setting/leader/lighthouse/model and research and development schools have been established. They serve a number of purposes:

- as pace setters for other schools;

- as institutions for experimental introduction of new materials and improved practices;

- as mechanisms for supervision and on the-spot guidance;

- as institutions for school-based in-service training of teachers.

Research support

67. Most countries have established specialized institutions for research and development support to school systems. These institutions have also been producing print and non-print materials for use by students and teachers. The faculty and students of departments/schools of education of universities undertake research which has implications for secondary education. It would, seem, however, that research undertaken does not address itself squarely to the reorientation and reform of secondary education. Even the research done in the area of secondary education tends to be of an academic type, the findings often destined to rot in the libraries of universities and/or institutes of education. Policy research is generally lacking. What is needed is an "envisioning of the future" and projecting the nature of competencies that schools must promote among the young so that they are prepared for a world characterized by change, uncertainty and emergence of challenges for which there are no readymade solutions. There is also need for action research which will help the formulation of school curriculum and methods of delivery. The determination of young people's competencies would be a reference point for such research. The other broad area which suggests itself for meaningful research seems to be the actual transaction of curriculum in differing classroom conditions. Nationwide data to assist curriculum planners do not seem to be available.

68. The NIER study has identified some other areas for further research. These are:

a) ways and means of achieving the required balance between electives and core subjects to produce a balanced secondary school curriculum;

b) teaching, learning, and assessment strategies most appropriate in values/moral education;

c) the relationship between class size and student achievement;

d) strategies for dealing effectively with large classes;

e) the correlation between ethnicity, economic deprivation, and levels of achievement;

f) strategies for including contemporary issues in the curriculum;

g) performance indicators to measure school effectiveness." 18/

69. There has to be a simultaneous effort to disseminate research findings and the experience of innovative practices. This dissemination should be in a mode which is easily understood by the practising teacher and the local-level administrator so that they can apply the more promising ones for enhancing the effectiveness and efficiency of schools and their activities. Training of teachers in action research would help them to experiment with innovative practices in classroom situations for enhancing student learning.

Conclusion

70. The Member States participating in APEID have varying degrees of success in reorientation, reform and restructuring of secondary education, especially as regards access and equity, balance and overload, relevance, education of the disabled and the gifted, diversification and vocationalization, teacher preparation, assessment and evaluation, decentralized management, and research. Even within a given country, invariably these problem areas have not been dealt with simultaneously, systematically and in a holistic manner. In many countries, reorientation, reform and restructuring tend to be partial, ad hoc, linear, piecemeal, crisis-oriented and polarized remedies rather than a more massive system-wide reform. No wonder then that many Member States continue to be concerned about secondary education being the weakest link of the educational chain.

71. It is in this context that the Regional Meeting to Assess the State-of-the-Art of Secondary Education considered it useful to develop proposed alternative conceptual designs of secondary education for the twenty-first century. The participants of the Meeting have, however, no illusion that the conceptual schemes will be a *panacea* to all the ills plaguing secondary education. The realization of the "vision" reflected in the designs will depend very much on the political will and commitment of the educational policy and decision-makers, as well as the seriousness of purpose of all those involved in secondary education - school principals/directors, supervisors, teachers, support staff and, more importantly the learners themselves and their parents and the community/society. The two alternative designs that were developed in the Meeting are provided in Chapter Three of this Report.

CHAPTER TWO:

IMPROVING THE QUALITY OF SECONDARY EDUCATION

1. In view of its implications for national development, the Member States of the region have been concerned with the second level of education as the weakest link. Although there is marked improvement in terms of access, enhancement of the quality and relevance of secondary education does not seem to have received as much attention and resources as they deserve.

2. The Study Group Meeting on Reorientation and Reform of Secondary Education (9-17 May 1988) stressed the need for revitalizing secondary education which was of crucial significance both to individuals as well as to nations. It stated:

> "Secondary education in most countries has remained neglected over the past few decades. It is the weakest link in the educational chain. Society cannot afford to neglect secondary education any longer. There are already pressures from primary education with the increase in enrolment ratios at that stage for expansion of secondary education. The participation rate at the secondary stage is likely to increase even though secondary education may not be made universal. Greater awareness of the value and utility of education in itself is generating greater demand for secondary education and participation will not remain confined to a selected group of individuals, but is likely to become very broad based and egalitarian in character.
>
> It is in this context that the role of secondary education assumes great significance. Unless it redesigns itself in such a way that it serves to accelerate national development, unless it meets the needs and aspirations of the people, unless it adopts non-conventional ways to enable it to meet the needs and aspirations of the people, unless it adopts non-conventional ways to enable it to meet the needs of scientific and technological changes which are rapidly taking place and unless the emphasis in secondary education is on human resource development secondary education will remain just another stage of education and will cease to influence future society. While on the one hand, it has to contribute to societal change, on the other it has also to continually change itself to suit the changing needs.
>
> Secondary education today then is at the threshold of reconstruction. Reform of secondary education envisages: structural changes; reformulation of objectives within the framework of national objectives of development; adoption of non-formal approaches and strategies; curriculum

renewal; diversification of courses; modernization of teaching-learning processes; new instructional materials and teaching aids; reform of evaluation techniques and examination procedures; teacher training - both pre-service and in-service; and improving the efficiency of the management of secondary education system and many others."

3. In pursuance of the recommendations of the Study Group Meeting, a number of countries organized national seminars/workshops on reorientation and reform of secondary education. The position in regard to some countries is summarized below:

i) Bangladesh. The objectives of the workshop organized on 20-24 December 1989 were:

- to review the curriculum of grades 6-10 to identify weaknesses;
- to identify issues and problems relating to administration;
- to examine the present teacher training programme;
- to examine the present examination system.

ii) Indonesia. The objectives of the workshop which was held on 17-19 January 1990 were:

to provide an opportunity to curriculum developers/implementers, educational officers, educational researchers, science/technology experts to exchange experiences and information on the implementation of the existing curriculum and its implementation as well as to provide input for the development of general secondary curriculum.

iii) Nepal. The workshop was organized on 26-30 November 1990 with the following objectives:

to review the status of supervision in secondary education;

to identify needs for supervision in the context of anticipated regulations on inspection (which did not issue till the workshop concluded);

develop and finalize an inspector's manual on supervision of school education.

iv) Pakistan. The workshop (17-22 March 1990) had the following objectives:

- to compare secondary education in Pakistan with other

countries and benefit from their experiences;

- to identify measures and strategies to reorientate secondary education;

- to promote innovations and reform in secondary education curriculum, teaching-learning process, administration and supervision;

- to assist in bringing about desired changes with a view to improving access, equality, efficiency and effectiveness.

v) People's Republic of China. The workshop was organized on 27 August 1990 with the following objectives:

- to share successful experiences of reorientation and reform in secondary education in rural areas;

- to find out problems in rural secondary education and their solutions;

to discuss tasks, objectives, curricula, subject content and teaching methods in rural secondary schools.

vi) Socialist Republic of Viet Nam. The workshop was organized on 7-15 August 1989. It had the following objectives:

to identify measures for reform of secondary education;

to plan follow-up activities and apply experiences for continuously carrying out research in educational strategy and urgent matters of secondary education.

vii) India. The workshop, organized on 20-24 December 1989, had the following objectives:

to review progress and discuss problems and difficulties encountered in implementation of reforms, particularly with reference to

equity
reorientation of content
reorientation of the process
vocationalization
international education.

4. The quality of secondary education lends itself to varied interpretations, among which are the following:

a) Student achievement, e.g., performance in achievement tests, public examinations or entrance examinations of universities;

b) Preparation for the world of work, including students

acquisition of agricultural, vocational and technical skills, and enterprise competencies; and

c) Preparation for life, in which secondary education is expected to contribute towards an "all-round development of individuals": knowledgeable, imbued with intellectual/thinking skills, equipped with vocational or agricultural and technical skills and attitudes and values (e.g. humanistic, ethical/moral and cultural values).

These are, in a way, many of the tasks that secondary education is expected to perform in a country.

5. The Member States have, no doubt, implemented a variety of measures to enhance the quality and relevance of secondary education. The curriculum of secondary schools has been, in the last decade or two, changed many times in most of the countries. This has been done in relation to the new tasks imposed on education by the changes that have taken place in social, economic and political spheres, widening frontiers of knowledge, particularly in science and technology and information technology, and the developments which have implications for the survival of mankind on this globe. Consequent changes were also made in teacher training strategies, in the provision of facilities and equipment to schools, in management and supervision practices and so on. While these changes have improved the quality of secondary education in certain respects, they have not led to a reorientation and reform of the total system. An overall framework for secondary education - goals and objectives, tasks and strategies, etc. - is needed. This could be done by the preparation of a systems design.

6. A number of variables determine the quality of learning in secondary schools. Among others, they include the following:

(a) The motivation of students to learn plays the most significant part. Student achievement has been shown to be positively correlated to their motivation to achieve. Many students in the system seem to use secondary education in a restricted instrumental sense, viz., to obtain education of a type which will help them either to enter an institution of higher learning or obtain a white collar job. Consequently, the main effort is to pursue courses which would be useful and only to the extent that they serve the purpose. The report of a national workshop in Viet Nam stated: "More alarming is the fact that the motives for learning of most of the students and teachers are getting weaker and weaker". Parental support for their children's learning is significant. This depends substantially on the former's perception of the utility of secondary education. If schools are seen as institutions which alienate their children from the community and its life and traditions, parental support for education would be difficult to guarantee. In the case of some groups, for instance the ethnic minorities, the medium and content of education are not perceived as reflecting their styles, aspirations and expectations.

(b) The quality of schooling is another important factor which affects the quality of student learning. A number of variables are

involved: teachers' motivation and competencies, school climate and conditions, the quality of school curriculum and instructional strategy and so on. Some communities and areas - rural areas and disadvantaged groups for instance, have least endowed schools. Schools lack physical facilities, minimum teaching equipment and committed competent and qualified teachers. They remain often at the periphery of the administration and supervision system.

(c) The assessment practices being generally followed do not allow a diagnosis of students' learning problems and the needed remedial actions. The emphasis is on measuring the performance at the end of the course/stage rather than on continuously assessing how students are learning and the problems that they are encountering.

(d) The curriculum and instructional methodology are important determinants of the quality of learning. A challenging curriculum evokes a more adequate response from students. Individualized instruction provides feedback to the teacher about the pace and quality of student learning. The methods emphasizing learning how to learn make students responsible for their learning.

(e) The support provided by research and development institutions to schools and teachers enable the latter to develop new insights into the teaching-learning process and adopt more innovative instructional strategies for enhancing student learning. While most countries have established R & D institutions/mechanisms, their outreach to schools and teachers remains restricted.

7. With the initiative of APEID, the two issues which have in recent years received attention in the region are:

i) the overcrowded classes which have become typical in many countries where resource constraints - material and human - and non-availability of land have made it difficult to establish secondary schools in desired numbers;

ii) the growing number of unemployed and unemployable school leavers who drop out or finish secondary schooling without usable skills and desirable attitudes.

8. In order to determine the nature of the problems and what can be done about them, two Joint Innovative Projects are being implemented under APEID in a number of countries. These are:

a) Improving the quality of learning of secondary school students; and;

b) Education for promoting the enterprise competencies of children and youth.

The present state of the two projects is discussed briefly.

Improving the quality of learning: Joint Innovative Project

9. The Study Group Meeting (9-17 May 1988) suggested the launching of a Joint Innovative Project in selected countries of the region for "improving the quality of teaching and learning in crowded classrooms". Overcrowded classes are a typical phenomenon in many metropolitan areas of the developing countries where non-availability of land and financial resources to establish more institutions leads to oversized classes which teachers, without adequate preparation, find difficult to handle. The focus in such a situation has to be on "alternative strategies for individualization of instruction, improving classroom management and assessing students' achievement".

10. The specific objectives proposed by the Study Group for the Project are:

"1. to raise the quality of learning of secondary school students;

2. to develop skills for improving the preparation, production and use of teaching-learning materials such as teachers' guides, training materials and multi-media packages specifically suited for crowded classrooms;

3. to develop skills to implement teaching-learning strategies for individualized instruction;

4. to develop management and supervision systems appropriate for crowded classrooms;

5. to develop new methods of assessing the achievement of students studying in crowded classrooms." 19/

11. The interested Member States were requested to identify principal investigators/project co-ordinators for the preparation of blueprints. Eight countries - Bangladesh, China, Iran, Malaysia, Nepal, Pakistan, Philippines and Viet Nam - have agreed to participate in the Project.

12. The reports made available by seven participating countries indicate that only preliminary work - such as national workshops to consider the various facets of the problem, time schedule for the project, designation of instructors/personnel, etc. - has been initiated. The position in respect of each of the reporting Member States is summarized below. 20/

China:

13. A national seminar was organized on 22 29 October 1990 in Beijing. Thirty-eight persons participated. They comprised members of the APEID Liaison Centre, persons in charge of administrative departments of education and 14 principals of the schools in three provinces where the project is to be carried out. The main purpose of the seminar was to acquaint the concerned persons with the purposes, tasks and content of the action plan, to work out details of the action plan and to establish

appropriate organizations for the implementation of the project. A three-year schedule for implementation of the project, April 1991 - September 1994, has been recommended. In a meeting of the APEID Associated Centres in China in March 1991, a progress report has been made about the JIP, and is reportedly progressing according to schedule. The project authorities have requested further support from UNESCO.

Iran

14. A national seminar on Reasons for Low Quality of Secondary Education and Strategies to Raise the Quality was organized on 16-20 February 1991. Forty-two persons, consisting of the Director-General of Secondary Education Bureau, the Vice Minister, the Secretary-General of the High Council of Education, 33 experts from 21 provinces and 6 experts from the Secondary Education Bureau participated. Apart from reviewing the status of secondary education in Iran and projecting the future requirement of places at the secondary stage, the seminar made a preliminary assessment of the low quality of secondary education and the reasons thereof. Some of the measures which are likely to improve the quality of secondary education were also identified.

Pakistan

15. A national workshop on Raising the Quality of Learning in Overcrowded Classes at Secondary Level was organized on 22-27 January 1991. Twenty-three administrators and school teachers participated. The main objectives of the workshop were:

a) "modification and/or development of curricular materials conducive to raising the quality of learning in the context of overcrowded classes;

b) development of strategies and methods suitable for overcrowded classes;

c) development of evaluative research designs to monitor improvement in the quality of secondary school students."

Apart from suggesting management, instructional and other strategies for improving the quality in overcrowded classes, the workshop considered an evaluative research design for learning science in secondary classes. Some exemplar curricular materials on science were also developed. It is expected that those materials will be tried out, revised and disseminated accordingly.

Philippines

16. A national workshop on the Development of Teacher Intervention Strategies for Specific Learning Needs, was organized on 19-26 March and 1-4 April 1991. The specific objectives of the Workshop were:

a) "to identify the specific learning needs of first-year students in oversized classes;

b) to prepare individualized learning programmes for specific learning needs in relation to present textbooks, teachers' manuals; and

c) to design teacher intervention strategies for individual learning needs."

The workshop developed prototype individual learning programmes for a few subjects and a teacher's handbook. It is expected that these materials will be tried out and achievements evaluated. It is envisioned that the outcome of the JIP will be an input to the Revised Secondary Education Programme (RSEP).

Nepal

17. A national seminar on Raising the Quality of Learning of Secondary School Students was organized on 2-5 April 1991. Twenty-seven persons, representing policy and educational planners, teacher educators, educational researchers, secondary school administrators and teachers participated. The major foci of the seminar were:

a) "making a general survey of the status, problems and issues related to secondary education in Nepal;

b) developing alternative delivery systems that can bring about the desired results; and

c) framing an appropriate research design that can effect quality improvement at this level of education."

Apart from making an analysis of the existing situation and suggesting reforms, the seminar considered a research design for the JIP.

Viet Nam

18. A national workshop on Raising the Quality of Learning of Secondary School Students was organized on 24-29 September 1990. The workshop was participated in by 100 participants which included educational administrators, experts involved in educational direction and outstanding teachers. The workshop analysed the present status of secondary education and its weaknesses and the major reasons for the low quality of student achievement. On the basis of these findings, some localities are expected to organize local-level workshops for raising the quality of learning in general and vocational schools.

Education for promoting enterprise competencies: Joint Innovative Project

19. An important dimension of the quality of learning is the relevance of education for individual and societal needs. The widespread dis-

satisfaction with the form and structure of secondary education has been discussed earlier as also the efforts to improve its quality. One of the significant weaknesses of the system which has been identified is the lack of employable skills which secondary education fails to promote. Even those who are trained for vocations look for employment in the organized sector rather than venture out. In this context, it seems necessary, as the Jakarta Plan has pointed out, to broaden the curricula of vocational and technical education "to inculcate entrepreneurial values and positive work ethics".

20. The Planning Meeting (11-15 December 1989) stated:

> "In spite of considerable modifications and changes, the education systems of many developing countries have not been able to deal adequately with the problems faced by young school leavers. The education that is provided to them develops few employable skills and often generates attitudes and expectations which are dysfunctional to economic development and social change. Instead of promoting the potentiality for gainful self-employment, the education systems tend to strengthen the motivation for wage employment, often in government establishments. Most of the educated youth of rural areas flock to towns and cities in search of jobs which, due to slow economic growth and increases in population, are never plentiful enough to cater to the needs of all the aspirants. Over the years, the ranks of the educated unemployed have swelled." 21/

21. The Planning Meeting recommended the launching of a Joint Innovative Project with the following main objectives: 22/

> "1. To develop among the children and youth, in addition to basic general education as needed, enterprise competencies such as those that trigger action (perseverance, ambition, initiative, flexibility, risk taking, etc.), empower for action (e.g., occupational, social, operations/management skills, networking, information, etc.), and sustain action (e.g. coping with success and failures, moral/social obligations and futures planning);
>
> 2. To develop appropriate materials, e.g., self-learning modules/training packages, games/simulation, etc. designed to enhance enterprise competencies;
>
> 3. To develop and try out alternative methodologies for drawing out and/or nurturing enterprise capabilities among children and youth involved in the JIP;
>
> 4. To develop and try out alternative modalities for infusing education for the promotion of enterprise

competencies at the macro and micro levels in continuing and formal education programmes;

5. To assess the effects and impact of the JIP on the life of the target population reached by the JIP."

22. As a follow-up of the Planning Meeting held in 1989, financial support has been provided to five countries: China, Indonesia, Philippines, Sri Lanka and Thailand, for undertaking national experimental projects to promote the enterprise competencies of children and youth, particularly through the general school curriculum. The conceptual framework and scheme jointly designed at the Planning Meeting were used as a basis for these national programmes. The work done in these countries is summarized below.

China

23. The expected outcome of the project is the production of teaching materials. The project covers Beijing and the provinces of Jiangsu, Hebei, Liaoning and Sichuan. A project co-ordination group of 22 persons held a meeting. Investigations were made on the status of the target population aged 12-24, the status of general education, and enterprise competencies and business, general social knowledge on how to establish business, technical aspects, and techniques and technologies for starting business. Training plans focused on agriculture, industry and business were developed. The integration of enterprise competencies with general education is through subject studies, out-of-class activities, creative thinking through science activities, and education at home and through social activities. The project is expected to be completed by early November 1991. Between now and the end of the project, future work will involve further promotion of public awareness, materials development, training, integration, then further study of the theories.

Indonesia

24. The expected outcome of the project is increased knowledge and skills of young girls and mothers in coastal/rural areas. By the end of January 1991, 20 poor community members aged 13-44 in coastal and rural areas in Yogyakarta had been identified for the project. At least three types of main occupations and two support occupations are being developed. The project is making use of the Income Generating Earning Group Project (I.G.L.G.P.) which already exists in the target area.

Philippines

25. The expected outcome of the project is enhanced awareness and occupational/management skills of unemployed youth aged 16-24. The project has been completed. A proposal for the implementation of a national project using the formal education system will be prepared and submitted later. The project was carried out in Barangay San Jose through a non-formal education programme of the Institute for Small-Scale Industries, University of the Philippines, and was conducted through two case studies, development of training materials and a model scheme. Thirteen

participants were selected.

26. The project team has stated that the project was an attempt to offer an integrated and holistic approach to promoting enterprise competencies among the target sector, and not merely a training activity. Some of the experiences of the project are:

a) The value of self-employment must be worked out through the formal school system for better appreciation of the long-term effects of entrepreneurship on the youth.

b) Financial assistance should also be available to the trainees, and there must be close linkages with local government units.

c) Training methodologies should be used in designing the curriculum in order for the participants to absorb critical concepts of entrepreneurship and business planning and management.

Sri Lanka

27. The expected outcome is a revision of curricula for general education for functional living. The progress report (March 1991) has stated that the target institutions were selected in four provinces, involving 22 institutions, schools, non-formal education units, non-governmental organizations and technical colleges. A workshop was held to review the programme, and a partial revision of the curricula and methodologies was done. The adopted curricula are being implemented and monitored.

Thailand

28. The expected outcome of the project is basic education cum enterprise competencies through materials production are training of secondary school students who are leaving school. There was some delay in initiating the project. The contract was signed only in April 1991.

29. According to Thailand's original work plan, there would be five stages of implementation, as follows:

a) Selecting target groups;
b) Preparation of materials;
c) Training of youth advisers;
d) Target groups running their income generating activities; and
e) Analysis and conclusion of the study.

The implementation will be closely related to the existing government project on income-generating enterprise for self-employment.

Conclusion

30. Although they do not touch all the aspects of the relevance of secondary education, the findings from the two Joint Innovative Projects should help in determining the directions in which specific action can be taken. The experience from promoting enterprise competencies would be of particular significance in bringing about a desirable change in education and training of secondary school students.

CHAPTER THREE:

TOWARDS IMPLEMENTING REFORM OF SECONDARY EDUCATION AT THE THRESHOLD OF THE TWENTY-FIRST CENTURY

I. Prospect for the Future

1. The realization that 5-6 years of basic education is not enough for the young to be able to function creatively and productively in the present day world characterized by radical changes and significant global concerns augurs well for secondary education. Secondary education - its expansion, qualitative improvement and enhancement of its relevance - has begun to receive the attention and emphasis that it should have much earlier. The justification for extending the duration of the compulsory period of schooling to cover secondary education is no longer being sought. What is now receiving increasing attention is the kind of secondary education - lower and upper - that students should receive so that they are more adequately prepared for the problems and challenges that will confront them on leaving the protected environment of educational institutions. The importance of the present day students for the future is obvious. What kind of future we will have will largely depend upon the students who leave schools. With voting age now being 18 in many countries, secondary school graduates have the potentiality of shaping the present, and the future.

2. Secondary education needs to be seen, and planned for, as part of the overall effort at:

a) reduction of economic and social disparities, including alleviation of poverty;

b) human resources development which empowers individuals and groups with requisite knowledge, skills and attitudes;

c) dealing with global challenges creatively.

3. In this context, a widening of access to secondary education for groups hitherto denied the opportunity to continue education beyond the primary level assumes significance. Secondary education should provide to the secondary school leavers the capability to bring about, through individual and community effort, a change in the social and economic life of the neighbourhood and the nation. This would suggest enhanced attention to increasing the relevance of secondary education, by modernizing curriculum and methodologies of instruction, by providing training in useful skills and by promoting attitudes, (like scientific rationality, willingness to take risks) and moral and ethical values.

4. The concept of human development has shifted from the idea of people as mere resources for national economic development to the view that people must have a more direct, central and active place in their country's life and growth. As the Jakarta Plan has stated: "Human resources development is, in this perspective, much more than an instrument for development; it

is the ultimate objective of the development process". The Human Development Report, 1991, of the United Nations Development Programme explains the new concept as follows:

> "It is about the sensible reallocation of resources to serve humanity better by involving as many people as possible in the creative use of those resources, rather than only a few vested interests. It is about participatory development where people are placed at the centre of all decision-making. It is about human freedom where the creative energies of the people are unleashed to generate economic and social opportunities for themselves and for their societies. And it is about the process of human development whose main aim is to develop and use all human capabilities." 23/

Given the new concept, it is clear that education for all is a crucial element in the development of the competencies that people will need if they are to participate fully in their communities.

5. There is also a need to create an awareness of the global issues, like population growth, mass poverty, environmental pollution, depletion of non-renewable resources, which impinge on a nation's economic, social and political life. With interdependence of mankind, these and other similar concerns have become worldwide in nature, and any effort to solve them must be both national and global.

6. Chapter One has highlighted some of the Member States' major concerns about secondary education, and also the nature of effort that is being made to deal with various problems. As would be noticed, the solutions thought of or experimented with, are at this stage still tentative and will require much greater validation before their system-wide adoption. At times they reflect piecemeal approaches to certain emerging problems. The time seems to have come when secondary education and its restructuring and reform should be dealt with in their totality. While the present situation would have to be taken note of, the development of secondary education, as that of education as a whole, should have a futuristic orientation.

Future scenario

7. Education needed for the future requires an envisioning of the future, which cannot be based merely on a linear projection of the current trends. The recent changes have been radical and breathtaking, and response to them has to be qualitatively different than when the pace of change was less rapid and allowed for more thought and delayed action. An exercise to envision the future was made in the Regional Symposium on Qualities Required of Education Today to Meet Foreseeable Demands in the Twenty First Century, organized under the auspices of APEID (16-18 August 1990). The Symposium presented the perspectives of the 21st century and their implications for educational preparation of young men and young women. The Symposium identified "a large measure of agreement among educational thinkers in the Asia Pacific countries about certain broad-range central trends of developments which have a bearing on the choices

that may be ahead in changing education".

8. The major components of the trends identified by the Symposium were:

i) The knowledge explosion that has taken place, particularly in science and technology, has affected human life as never before. While the unwise application of scientific and technological advancement has created problems for human existence (nuclear weapons), the new developments offer immense possibilities for human survival (life saving drugs) and benefit (biotechnology). The explosion of knowledge and its implications must be reflected in the programmes of educational institutions, since education "is central to the knowledge-based society because it is the human being who is the creator, preserver and sometimes tragically, the destroyer of knowledge". It is not enough for education to acquaint its clientele with knowledge advances, but also help them to appreciate the individual's responsibility and accountability for the consequences of the application of that knowledge.

ii) The changing nature of development perspective, which does not now concern itself only with the growth of GNP or indices of industrial production, and which does not assume automatic trickling down of the benefits of economic growth, is yet another facet of the change that is taking place. There is now a greater emphasis on "human goals of such development". The concern is with the condition of the globe and mankind, and the quality of life, particularly of those groups who have been marginalized by economic advancement - women, minority groups, "the economically and socially dispossessed and the politically rendered voiceless". The need is sustainable development, with present generation not resorting to practices which makes the future generation vulnerable. In the new development perspective and effort, education's role is central in empowering people for self-reliant effort to bring about a just and equitable world order and in promoting a sense of responsibility and accountability to the generation which is to come.

iii) The growing interdependence of mankind, linking diverse cultures, requires a radical change in outlook on the part of mankind. "We are", as the Human Development Report, 1991 states: "a global community in every sense - not just economically interdependent but sharing a common environment and exposed to common risks of war and social dislocation". The disasters - natural or man-made - know no national frontiers. Every nation and its people are affected. The Gulf War is a classic example of events in one part of the globe affecting a whole set of nations. Not only have we to be appreciative and tolerant of cultural and other diversities, but also be ever ready to co-operate and collaborate for mitigating the suffering that characterizes some parts and population segments of the present-day world. We should be ever conscious that what we do

as people will have a rippling effect on others.

iv) There is an urgency to deal with the problems, that mankind is facing today, globally. Many of these have resulted from an unthinking application of science and technology and personal and national non-acceptance of the accountability of one's actions. These problems include: mass poverty, population growth, environmental pollution and degradation, depletion of non-renewable resources, deforestation, and so on. Education should promote an understanding of these and their consequences to the very survival of mankind, if a radical reordering of life styles does not take place. Above all, it should promote a sense of personal accountability for "unwise" actions.

v) The "movement of the human spirit", which promoted in the past "insights of sages and seers" and which, in "modern times, is more like streams of ideas and events merging into each other and defining a collective aspiration", is another significant world trend. The "crisis of values" characterizing the present is resulting in the reconsideration of the goals and objectives of education and its responsibility in promoting moral and ethical values among students.

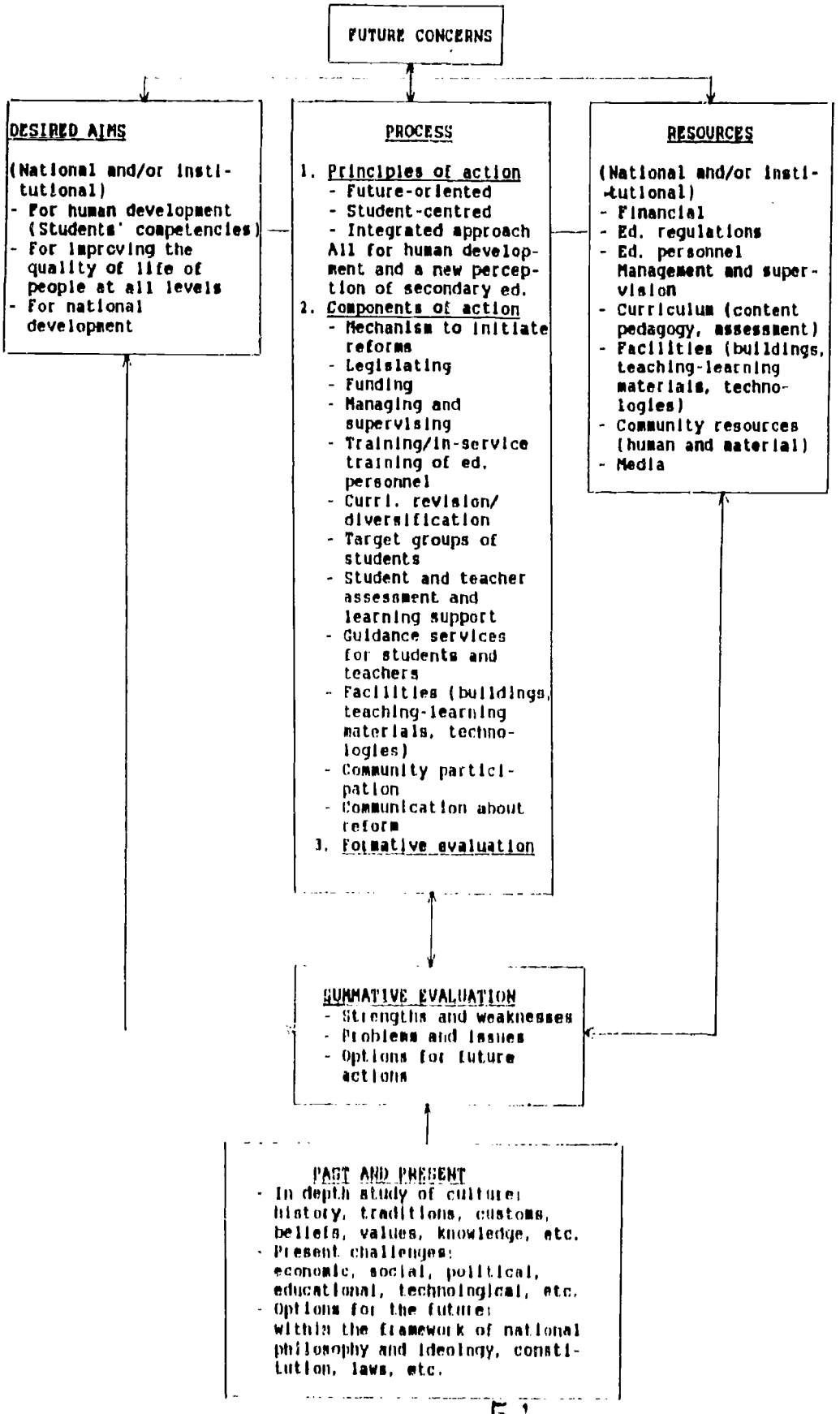
9. While a vision of the future provides a direction for action, it is necessary at this stage to recognize the limitations of basing educational programmes entirely on the likely future trends and concerns as presented above. Firstly, it is not always possible to identify with certitude what these trends will be like, and the responses that individuals, groups and nations will make to them. Secondly, it is not easy to completely reorder the education system in relation to a probable future. The current programmes, determined largely by current enrolments and currently held views on what education should consist of, severely restrict the possibility to bring about a radical change in the system. Lastly, there are a host of other considerations - sanctified by educational theories and principles as well as by past practices - which determine what schools ought to do. The future scenario does not present an exhaustive picture.

10. It is, however, indicative of the issues that educational decision makers need to grapple with to ensure that students are more adequately prepared for an uncertain and constantly changing future. The future scenario helps in determining the essential tasks of education which nations can ignore only at the cost of their development. For instance, unless the curricula take note of and incorporate the scientific and technological developments, the future generation will be less adequately prepared to meet the challenges and potentialities that these developments pose and offer.

II. Proposed Conceptual Designs of Secondary Education Reform

11. The need for a systems design was stressed in the Meeting. With a view to providing a clear-cut view of the various educational tasks and their contextual reference, the Meeting developed two conceptual designs. These are presented in the following pages. These designs can easily be applied to a school-level situation. Appendix E illustrates the application of the design A at the micro level.

Design A


FUTURE CONCERNS
DESIRED AIMS
(National and/or institutional)
- For human development (Students' competencies)
- For improving the quality of life of people at all levels
- For national development
PROCESS
1. Principles of action
- Future-oriented
- Student-centred
- Integrated approach
All for human development and a new perception of secondary ed.
2. Components of action
- Mechanism to initiate reforms
- Legislating
- Funding
- Managing and supervising
- Training/in-service training of ed. personnel
- Curri. revision/ diversification
- Target groups of students
- Student and teacher assessment and learning support
- Guidance services for students and teachers
- Facilities (buildings, teaching-learning materials, technologies)
- Community participation
- Communication about reform
3. Formative evaluation
RESOURCES
(National and/or institutional)
- Financial
- Ed. regulations
- Ed. personnel Management and supervision
- Curriculum (content pedagogy, assessment)
- Facilities (buildings, teaching-learning materials, technologies)
- Community resources (human and material)
- Media
SUMMATIVE EVALUATION
- Strengths and weaknesses
- Problems and issues
- Options for future actions
PAST AND PRESENT
- In depth study of culture: history, traditions, customs, beliefs, values, knowledge, etc.
- Present challenges: economic, social, political, educational, technological, etc.
- Options for the future: within the framework of national philosophy and ideology, constitution, laws, etc.

Explanatory notes for Design A

i) General. Each aspect of the design influences all other aspects. For example, as the process of secondary education reform develops, it will produce changes in the country's resources and, in time, may produce new desired aims. Another more specific example is that the desired aims for students' competencies will require distinct processes and resources. The design is dynamic and flexible to reflect and to respond to the rate of change nationally and internationally. The design also recognizes the varied and important regional concerns in secondary education reform which are described in Chapter One. The design has been developed in such a way that it may be used by educational policy makers and administrators who will examine the system in its entirety, as well as by institutional authorities who will implement the reform itself.

ii) The Future Concerns. The future concerns section of the design includes not only the five global concerns described earlier in this Chapter under the sub-heading "Future Scenario", but also more specific national issues such as social, ethnic, gender, geographic and economic disparities, cultural identity, the need for national economic independence. The design draws attention to future concerns which should be a significant guide in the conceptualization of the reform of secondary education.

iii) Past and Present. The past and present have been joined in the design to indicate their close relationship. A country's past influences the present, and so a study of the two together is a part of any educational reform. This section of the design indicates some aspects of the past and present which should be examined as part of educational reform for human development. For example, cultural or traditional practices may well indicate some specific objectives for human development. On the other hand, an examination of challenges in some countries will highlight an explosion of student numbers which will have an effect on the provision of facilities in the process part of reform.

iv) Desired Aims. Desired aims for secondary education will vary from country to country, but the design stresses the importance of setting aims, goals and objectives before the process of reform begins. This section of the design reflects the new concept of human development. The aims focus on the inter-connection between human and national socio-economic development and the necessity for individual participation in community decision-making and in human, economic and political freedoms. Students' competencies (cognitive, affective spiritual, psycho-motor, etc.) are included as part and parcel of human development as desired national and institutional aims.

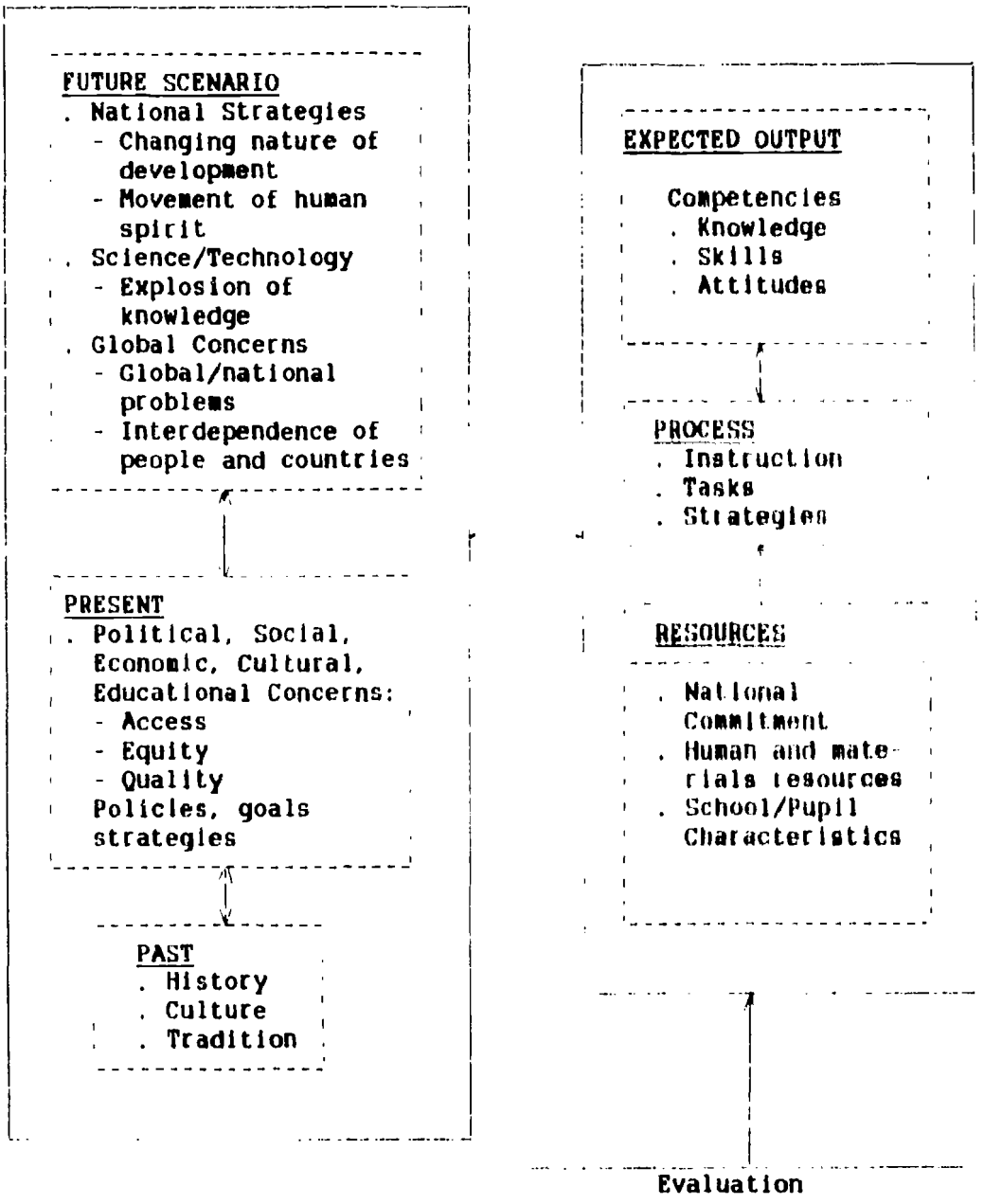
v) Resources. A study of existing human and material resources is a necessary part of planning for educational reform. Such a study will show the current strengths which can be used for reform, and it will show limitations. For example, in examining educational personnel, it may be found that there are sufficient administrators, supervisors and teachers for the proposed reforms, but that they will all require extra training for their implementation. Another example is that in the study of the

secondary school curriculum, it may be found that the transition from primary to secondary and to tertiary education (or to work) is not properly sequenced. The list of resources is not finite, and may well be expanded or reduced when detailed planning for reform begins. There also appears to be some repetition of items listed under the "Process" heading. This is a deliberate aspect of the design to encourage a wider search for existing resources and their innovative use and adaptation.

vi) Process. The design separates general principles from the specific components of the reform process. The general principles are intended to guide reform, at all levels, towards human development. The specific components refer to areas which may need to be included in an integrated reform of secondary education. Some components may require more drastic changes than others, depending on the level of development of secondary education in each country. The list of components is deliberately extensive to encourage an integrated, system-wide approach to reform, both at the national level and at the school level. This design stresses that ad hoc responses to challenges in secondary education are no longer either appropriate or justifiable. Therefore, the list is lengthy and contains apparent overlaps with the "Resources" list to emphasize this point.

vii) Evaluation. Reform of the secondary education system must involve continuous evaluation, both formal and informal. The design highlights formative and summative evaluation for feedback which will lead to worthwhile modifications of each aspect of the reform and of the reform of secondary education as a whole. Summative evaluation may be carried out by a committee or a commission appointed specially for the purpose, and is positioned where it is in the design to indicate the need for a system-wide evaluation of all aspects of the reform to be built into the programme for reform.

Design B


FUTURE SCENARIO
. National Strategies
- Changing nature of development
- Movement of human spirit
. Science/Technology
- Explosion of knowledge
. Global Concerns
- Global/national problems
- Interdependence of people and countries
PRESENT
. Political, Social, Economic, Cultural, Educational Concerns:
- Access
- Equity
- Quality
Policies, goals strategies
PAST
. History
. Culture
. Tradition
EXPECTED OUTPUT
Competencies
. Knowledge
. Skills
. Attitudes
PROCESS
. Instruction
. Tasks
. Strategies
RESOURCES
. National Commitment
. Human and materials resources
. School/Pupil Characteristics
Evaluation

Explanatory Notes for Design B

i) General. The design provides for consideration of both macro (policies, resources) and micro issues (school practices). Given the framework, the policy-level questions would, illustratively, be:

- Given the trends and concerns, what should be the goals of secondary education?
- How should access to secondary education be widened, particularly of the deprived groups?
- In the light of the middle-level manpower forecasts, what should be the extent of diversion of students to skill-oriented courses?
- Given the various tasks, how can resources be mobilized for and provided to secondary education?

At the micro level, the issues would be, again illustratively, the training of teachers for motivating students belonging to disadvantaged groups for learning, allocation of school resources to different activities/programmes, creating an effective school climate for promotion of attitudes, and so on.

ii) The Systems Approach. The three elements of a systems design are input, process and output, each one consisting of a number of sub-elements. Each one of these is affected by the goals proposed for education, by practices adopted in the past, by the present expectations of parents and society, etc. It is felt that in view of the challenges that school learners will have to face, it is necessary to consider first the kind of competencies (cognitive, psycho-motor and affective) that the future graduates of secondary schools will require. Working backwards, it should be possible to indicate the inputs and processes that will be needed or the changes that might be required in them so that the objective of preparing young men and women for the future is fulfilled.

iii) The Future Scenario. Within the above context, the design attempts to visualize some of the challenges to which secondary education would have to make a response, now and in the years to come. The Regional Symposium on Qualities Required of Education Today (16-18 August 1990) highlighted five major global trends/concerns which education, albeit secondary education, needs to take note of. These include: the knowledge explosion, the changing nature of development, the growing interdependence of mankind, the problems faced by mankind and the movement of the human spirit which means concern for others. The limitations of basing educational development solely or entirely on the future scenario have been referred to earlier.

iv) The Past and the Present. The past and the present also have a direct bearing on the objectives, content and processes of education. Every nation wishes to transmit its cultural heritage to the on-coming generation. Consequently, the study of history and culture becomes an

important element of the school curriculum and programme. As regards the present, every nation has expectations of the education system in terms of what it should deliver. For one thing education is expected to deal with national concerns, which might be indigenous in nature or derived from global developments. The expectations of parents and communities are other sources for determining what education should achieve and how it should be operated. The legitimacy of educational goals and practices, and the priority that is given to secondary education will determine largely the resources (input) that will be made available for educational activities. The overall development goals of the nation - often enumerated in a nation's constitution, development plans, and educational policy statements - provide the main directions for an education system.

v) Expected Output and Process. The expected output in the design is, for the sake of simplicity and easy explanation, classified in terms of competencies of secondary school graduates. They might be cognitive, psycho-motor and affective in character. In order to promote these competencies, the system requires:

a) resources (inputs) of diverse kinds such as schools having requisite plant, equipment and personnel, a proper climate for educational activities, pupils who come from different backgrounds and, therefore, bring with them different sets of expectations, and so on.

b) a process suitable for the development of identified competencies among students, which includes a host of elements: a continuously evolving curriculum, teachers' competencies, attitudes and styles promoted by pre-service and in-service training, instructional strategies including the use of educational technology, assessment of students' performance on various tasks, and so on.

vi) Evaluation. In order to determine the efficiency and effectiveness of the system, it is necessary to have arrangements for evaluation and feedback. These could be obtained formally (evaluative studies) or informally (debates in legislatures, community views, etc.). The feedback helps to determine the extent to which objectives are being fulfilled both efficiently and effectively, and the modifications that are required in objectives (in the light of the study of their feasibility), resources (inputs) and processes.

III. Implications for Education

12. The implications of a systems design of the reform of secondary education would require a careful analysis of each of the educational components, and on the basis of this analysis, the preparation and implementation of a development plan where various elements have been properly sequenced and mutual reinforcing and supportive of various actions provided for.

13. The educational tasks would, illustratively, include:

i) Widening access to secondary education to:

- reduce spatial disparities;

- accelerate educational participation rates of girls, the disadvantaged and the disabled so as to empower them for self-directed effort at improving their quality of life;

ii) extension of the duration of compulsory schooling to prepare students more adequately for a complex and ever changing world;

iii) diversifying education to cater to varied interests and abilities;

iv) Provision of non-formal modes for:

- educating those who, for various reasons, cannot join in the hours that a school functions and/or on a full-time basis;

- lifelong learning;

learning required for adaptation to change;

- learning of new skills required in the light of scientific and technological advances;

v) Detailed curriculum revisions and updating as a continuous process (including weeding out of redundant materials) providing for:

- compulsory study of science and mathematics;

- enhanced communication skills;

- new developments in science and technology (biotechnology, micro-biology, space science) and their applications;

- integration of disciplines allowing for multi-disciplinary analysis and approach;

- computers and their application;

- ethical and moral values;

- work and production orientation, including education for entrepreneurship and enterprise;

- awareness of global problems and their solutions;

- appreciation of the diversity of cultures and traditions;

- formation of a world view on issues;
- aesthetic sensitivity;

vi) Reform of instructional methodology, with emphasis on promoting:

- students' ability to learn on their own;
- use of communication technology for more efficient and effective teaching and learning;
- peer group learning;
- practical application of knowledge in both classroom and outside classroom situations;
- individualized instruction;
- media support to education;

vii) Reform of content and modalities of teacher preparation;

viii) Decentralized planning and management of education to increase its relevance through:

- community involvement and participation;
- empowerment of teachers in educational decision making;

ix) Improved assessment practices to ensure an all-round development of students' potential;

x) Provision for educational and vocational guidance of students.

The list is illustrative and does not exhaust all the actions that would have to be taken. Furthermore, each of the above actions will require detailed elaboration.

CHAPTER FOUR:

REGIONAL AND NATIONAL ACTIONS FOR 1992-1996

I. Main Actions

1. In the light of the demands that the twenty-first century would place on secondary education, the Twelfth Regional Consultation Meeting (RCM) on the Asia and Pacific Programme of Educational Innovation for Development (APEID) (20-27 August 1990) identified secondary education as a major area for Member States' and APEID's action. The RCM noted that, in view of the realization that an education for five or six years will not be enough to cope with the demands of the twenty-first century, there was an urgent case for widening access to secondary education. In the context of the significance of secondary education in the education system and the many objectives that it fulfills, the RCM stressed the need for attention being "focused on the second level of education through formal and non-formal mechanisms and its capacity to provide a practical, relevant and useful education that will assist young people to meet the demands of the twenty-first century".

2. The RCM also indicated the broad directions in which reorientation and qualitative improvement of secondary education should be undertaken. These are, among others:

a) It is essential to ensure that it meets the needs of all students rather than few;

b) The emphasis should move away from traditional academic curricula to curricula that are practical and relevant;

c) The emphasis should be on the provision of general education designed to equip young people with critical competencies such as thinking and analytical skills;

d) It should enable the secondary school students to leave school as flexible, adaptable, creative and innovative individuals who can participate effectively in the social, political and economic life of the local community and the nation;

e) Education for and about the world of work, including the development of enterprise skills, should be an integral part of such a general education. At the same time consideration might have to be given to parallel forms of secondary education (formal or non-formal), with emphasis on skills training, in respect of existing, new and emerging skill areas;

f) In the programme of skill development, consideration will have to be given to the need for constant upgrading of skills and adaptation to occupational changes brought about by technological developments.

3. The RCM identified the following ten areas for action:

a) National level educational assessment/evaluation programmes with regional co-ordination;

b) Education reform initiatives (relative to new developments in curricula, skills development, enterprise education and examination reform);

c) Creative methods and alternative structures for quality secondary education (including teacher education);

d) School-based innovations leading to qualitative changes;

e) Education and work responsive to national needs;

f) Non-formal education, including community and adult education;

g) Distance education;

h) Innovative programmes for promoting morals, ethics and values;

i) Education for nurturing talent;

j) Co-operative action-oriented research on reorientation and qualitative improvement of secondary education.

4. The other area identified by the RCM for the Fifth Programming Cycle (1992-1996) which has significant linkages with the quality and relevance of secondary education is Science and Technology Education (including Science for All, Mathematics and Information Processing at the Primary and Secondary Levels). The objectives and emphases in national and regional action in science and technology education would be on:

a) Co-operative programmes for developing model curricula and materials:

i) emphasizing process skills, applications, creativity, morals, ethics and values;

ii) related to the environment;

iii) related to future science content;

b) Innovative methods of teaching and those facilitating learning;

c) Co-operative action-oriented research on science and technology education;

d) Use of information processing technology for science and technology education including computer education.

5. The Programme Development Meeting (PDM) held in association with the Regional Consultation Meeting (RCM), designed a detailed Work Plan of APEID for the Fifth Programming Cycle, 1992-1996. For each of the action areas recommended by the RCM for secondary education and science and technology education, the objectives, outputs and detailed modalities have been worked out. The emphasis in programming is on:

a) status studies for surveying the state-of-the-art and their synthesis;

b) development, through national and regional workshops, of exemplary curricular and instructional materials and alternative delivery mechanisms and their try-out;

c) enhancement of national capabilities through the training of personnel, particularly teachers, for effective and efficient performance of new roles, (through national workshops, attachments and mobile training workshops);

d) case studies of innovative approaches and their synthesis for mutual sharing among member countries;

e) initiation of developmental growth point projects for determining the feasibility of new approaches for systemwide incorporation;

f) monitoring and evaluation of experiences;

g) research to determine the effectiveness of various actions;

h) theme oriented studies detailing experiences of countries in similar educational situations;

i) dissemination of information.

II. Recommendations for Follow-up Actions

6. The two designs outlined earlier in this chapter provide a framework for effecting systemwide transformation of secondary education. The need now is to initiate systematic efforts at the national, regional and international levels directed to this purpose, the Meeting recommended the nature of follow-up action to this Meeting. This is discussed briefly.

7. At the national level, each Member State of the region should, in the context of its socio-economic and educational situation, prepare an action plan for enhancing the quality and relevance of secondary education, taking into consideration the total system with various linkages provided for. The action plan would need to be incorporated in the educational development plan of the country, and specific material and human resources allocated for its implementation;

8. There is also a need for the Member States to seek bilateral assistance, through such mechanisms as TCDC, Colombo Plan, ASEAN, etc. For instance, training of personnel can be undertaken in institutions with known capabilities and adequate resources, with the host institution providing the funds. This should particularly be the modality for assisting the least developed countries, where suitable infrastructural facilities are not yet adequate.

9. Member States should also seek funds from organizations supporting educational development programmes in developing countries, such as JAICA, SIDA, DANIDA, USAID and others. The funds provided by these agencies are on the basis of specific requests from the countries seeking assistance.

10. At the regional level, it might be useful for UNESCO to:

a) organize experts' meetings at the sub-regional level devoted to the consideration of issues of particular relevance to the countries of the sub-region, and to develop a management framework;

b) assist Member States, particularly those with inadequate infrastructure and expertise, to develop plans of action with the support of specialists drawn from the region; and

c) provide support for the implementation of plans of action in selected development growth points, the experience from which could help them in the transformation of the system on a wider scale.

11. There is a case for continuance and/or enhancement voluntary contributions from the Member States to APEID which, in the context of a regional initiative for reorientation and reform of secondary education, will require substantial strength in terms of both staff resources and funds for more intensive and diversified activities.

12. At the international level, there is need for UNESCO to assist in seeking extra-budgetary resources as recommended by the Advisory Committee on Regional Co-operation in Education in Asia and the Pacific (Sixth Session, 6-10 May 1991). Apart from including specific funds for support to secondary education in its regular budget, it should assist Member States in developing worthwhile projects and in negotiating financial support from donor agencies.

13. The implementation of programmes for expansion and improvement of secondary education would no doubt be the responsibility of the national governments. However, given the constraint of resources that most countries of the region experience in bringing about qualitative changes in education, there is a strong case for support from international funding institutions. Specific project assistance could also be made available by the United Nations Development Programme (UNDP), which has so far shown limited interest in reorientation and reform of secondary education.

14. Project support could be extended, among others, in the following main directions:

i) support for wider implementation of programmes, the validity of which has been demonstrated through experimental/pilot projects;

ii) support for specific area development approach with convergence of different inputs, particularly in those areas which are disadvantaged.

iii) Support for empirical research to:

- assist curriculum design in relation to global issues;
- prepare teachers for new syllabi and materials and individualized instruction;
- ensure impact of curriculum changes on adolescent behaviour;
- develop skills to deal with redundancy of and changes in skills.

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3. In Search of New Models of Secondary Education, Report of a Task Force Meeting (26-31 July 1984) Bangkok, UNESCO PROAP, Bangkok, 1985.

4. Some Critical Aspects of Secondary Education in the Countries of Asia and Pacific, National Institute for Educational Research, Japan, December 1988.

5. Study Group Meeting on Reorientation and Reform of Secondary Education (9-17 May 1988), UNESCO PROAP, Bangkok, 1988 (mimeographed).

6. R.S. Adams: Some Critical Aspects of Secondary Education in Asia and the Pacific - A Status Report, PROAP, Bangkok, May 1988.

7. Reports of national workshops are available in respect of Bangladesh, China, Indonesia, India, Pakistan, Nepal, Viet Nam.

8. The workshop dates for various countries were:

China	: 22-29 October 1990
Iran	: 16-20 February 1991
Nepal	: 2-5 April 1991
Pakistan	: 22-27 January 1991
Philippines	: 19-29 March and 1-4 April 1991
Viet Nam	: 24-29 September 1990

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10. Ibid - p. 52

11. Ibid - p. 52

12. Work Plan of APEID for the Fifth Programming Cycle, 1992-1996, UNESCO PROAP, Bangkok, 1991

13. Unless otherwise stated, information in this section is based on

    - UNESCO's Statistical Yearbook
    - NIER Study
    - Synthesis report by R.S. Adams

- Reports of National Seminars/Workshops on Reorientation and Reform of Secondary Education and on Raising the Quality of Learning of Secondary School Students.

14. NIER Study - Information constructed from Tables 2-3 at p. 27.

15. Planning Meeting on Innovative Education for Promoting the Enterprise Competencies of Children and Youth (11-15 December 1989), UNESCO PROAP, Bangkok, 1990, P. 4.

16. Ibid p. 29.

17. Reorientation and Reform of Secondary Education in Asia and the Pacific Region : A Status Report, UNESCO PROAP, Bangkok, 1989, P. 48.

18. Constructed from Tables 1-18 and 1-21 at pp. 21 and 22 of the NIER Study.

19. NIER Study, p. 23.

20. Ibid p. 100.

21. Study Group Meeting, pp. VII 3-4.

22. Information has been culled out from national workshops on raising the level of learning of secondary school students.

23. Human Development, 1991, UNDP, Foreword P. iii.

24. Raja Roy Singh : Education for the Twenty-First Century - Asia-Pacific Perspectives, 1991 (in print).

APPENDIX A

Gross Enrolment Ratios at the Second Level of Education

No.	Country	Base Year	End Year	Gross Enrolment Ratios (Relevant Age Group Population)					
				Base Year			End Year		
				M/F	M	F	M/F	M	F
1.	Afghanistan	1975	1986	7	11	2	7	10	5
2.	Bangladesh	1975	1988	19	29	8	18	24	11
3.	Bhutan	1976	1988	1	2	0.3	5	7	2
4.	China	1975	1987	46	54	38	43	50	37
5.	India	1975	1986	28	37	18	39	50	27
6.	Indonesia	1975	1986	20	25	15	46	NA	NA
7.	Iran	1975	1987	45	57	33	48	57	39
8.	Japan	1975	1987	92	91	92	95	95	97
9.	Laos	1980	1985	21	25	16	23	27	19
10.	Malaysia	1975	1987	46	53	39	59	59	59
11.	Mongolia	1975	1986	81	77	84	88	84	92
12.	Myanmar	1975	1983	22	24	20	24	NA	24
14.	Nepal	1975	1985	13	23	4	26	NA	NA
13.	Pakistan	1975	1987	15	22	7	19	26	11
15.	Philippines	1975	1988	54	NA	NA	66	66	66
16.	Korea (Rep. of)	1975	1988	56	64	48	89	91	86
17.	Singapore	1975	1984	52	61	52	71	70	73
18.	Sri Lanka	1975	1986	48	47	49	61	58	64
19.	Thailand	1975	1987	25	28	22	28	NA	NA
20.	Turkey	1975	1987	29	40	19	64	57	34
21.	Viet Nam	1975	1985	39	48	41	42	43	40
22.	Australia	1975	1987	87	87	87	98	96	99
23.	Fiji	1975	1986	44	43	44	56	54	57
24.	New Zealand	1975	1987	81	80	81	85	84	86
25.	Papua New Guinea	1975	1987	12	16	7	12	16	9
26.	USSR	1975	1987	94	NA	NA	98	NA	NA

NA : Not Available

Source : Statistical Yearbook - 1989, UNESCO, Table 3.2

APPENDIX B

Duration of Compulsory Education

No.	Country	Compulsory Education Duration		
		Age Limits	Duration (Years)	Age of Entry to Secondary Stage (Years)
1.	Afghanistan	7-15	8	-
2.	Bangladesh	6-10	5	-
3.	Bhutan	-	-	-
4.	China	7-16	9	14
5.	India	6-14	8	14
6.	Indonesia	7-13	6	13
7.	Iran	6-11	5	-
8.	Japan	6-15	9	12
9.	Korea (Dem. People s Republic of)	5-15	10	-
10.	Korea (Republic of)	6-12	6	12
11.	Laos	7-12	5	-
12.	Malaysia	6-15	9	12
13.	Maldives	-	-	-
14.	Myanmar	5-10	5	-
15.	Mongolia	8-16	8	-
16.	Nepal	6-11	5	11
17.	Pakistan	-	-	10
18.	Philippines	7-13	6	-
19.	Singapore	-	-	-
20.	Sri Lanka	5-15	10	10
21.	Thailand	7-15	6	12
22.	Turkey	6-14	8	-
23.	Viet Nam	6-11	5	-
24.	Australia	6-16	9, 10	12
25.	Fiji	-	-	-
26.	New Zealand	5-15	10	-
27.	Papua New Guinea	-	-	13
28.	Samoa	-	-	13
29.	Tonga	6-14	8	-
30.	USSR	7-17	10	-

Sources: i) Statistical Yearbook - 1989, UNESCO, Table 3.1

ii) Some Critical Aspects of Secondary Education in the Countries of Asia and the Pacific, NIER, 1988

APPENDIX C

Structure of School Education

No.	Country	First Level (Grades)	Second Level (Grades) lower	upper
1.	Afghanistan	I - VIII	IX - XI	
2.	Australia	I - VI	VII - IX	X - XI
3.	Bangladesh	I - V	VI - X	XI - XII
4.	Bhutan	I - VI	VI - XI	XII - XIII
5.	China	I - V	VI - VIII	IX - X
6.	Fiji	I V	VI - XI	
7.	India	I - VIII	IX - X	XI - XII
8.	Indonesia	I - VI	VII - IX	X - XII
9.	Iran	I - V	VI - VIII	IX - XII
10.	Japan	I - VI	VII - IX	X - XII
11.	Korea (Dem. Republic)	I - IV	V - XI	
12.	Korea (Republic of)	I - VI	VII - IX	X - XII
13.	Lao PDR	I - V	VI - VIII	IX - XI
14.	Malaysia	I - VI	VII - IX	X - XIII
15.	Maldives	I - V	VI - X	XI - XII
16.	Mongolia	I - III	IV - VIII	IX - X
17.	Myanmar	I - V	VI - IX	X - XI
18.	Nepal	I - V	VI - VIII	IX - XI
19.	New Zealand	I - V	VI - X	XI - XII/ XIII
20.	Pakistan	I - V	VI - VIII*	IX - X* XI - XII*
21.	Papua New Guinea	I - VI	XII - X	XI - XII
22.	Philippines	I - VI	VII - IX	X - XIII
23.	Singapore	I - VI	VII - IX	X - XII
24.	Sri Lanka	I - V	VI - X	XI - XII
25.	Tonga	I - VI	VII - XII	
26.	Turkey	I - V	VI - VIII	IX - XII
27.	USSR	I - V	VI - VIII	IX - X
28.	Viet Nam	I - V	VI - IX	X - XIII

* Designated as lower secondary, secondary and higher secondary.

Source: Statistical Yearbook, 1989, Paris, UNESCO, Table 3.1

APPENDIX D

Gross Enrolment Ratios at the Tertiary Level of Education for 1986-88

No.	Country	Gross Enrolment Ratio (Relevant Age Group Population)	
		Males	Females
1.	Afghanistan* (1986)	2.8	0.4
2.	Bangladesh	7.8	1.4
3.	Bhutan	0.3	0.1
4.	China	2.3	1.1
5.	India	12.3	5.2
6.	Indonesia	8.8	4.2
7.	Iran	7.1	2.7
8.	Japan	35.0	21.4
9.	Korea (Dem. People's Republic of)	49.0	22.9
10.	Korea* (Republic of) (1988)	49.0	22.9
11.	Laos (1985)	2.1	1.2
12.	Malaysia	7.6	6.1
13.	Maldives	NA	NA
14.	Myanmar	NA	NA
15.	Mongolia	17.4	26.0
16.	Nepal	7.6	1.8
17.	Pakistan	6.8	3.1
18.	Philippines	35.5	40.3
19.	Singapore	13.3	10.3
20.	Sri Lanka	4.7	3.2
21.	Thailand	NA	NA
22.	Turkey*	13.4	7.1
23.	Viet Nam	NA	NA
24.	Australia	28.8	28.8
25.	Fiji* (1987)	5.5	3.3
26.	New Zealand	37.1	35.6
27.	Papua New Guinea	2.8	1.1
28.	Samoa	NA	NA
29.	Tonga	NA	NA
30.	USSR	19.9	25.4

Source: 1. For all countries except the ones marked (*), Human Development Report, 1990, New York, United Nations Development Programme, 1990, pp. 152-153.

2. For others, Statistical Yearbook, 1989, Paris, UNESCO, 1989. Table 3.2

APPENDIX E

The Developmental Reform of Tikipunga High School, Whangarei New Zealand A Case Study to Illustrate Design A in Chapter Two

Introduction

In the national framework of New Zealand's education reform, secondary schools have considerable independence. Each school is governed by a Board of Trustees elected by the parents, and each Board also includes a representative of the school staff and a (student) representative of the students. The Principal is a full member of this Board. The powers of the Board are broadly defined by the Central Ministry of Education and are wide: control of all operational expenditure, employment of staff, establishing policies for all aspects of school life and generally governing the school in the best interests of the students.

Secondary school Principals and teachers also have considerable autonomy : the day-to-day expenditure of school funds, the right to decide the content, pedagogy and assessment strategies for their classes, deciding on school practices and so on. The degree of staff participation in these areas varies considerably from school to school, depending (usually) on the philosophy of the Board and Principal.

This school independence is supported by central authorities, each of which is separate from the Central Ministry. One, for example, registers teachers to maintain standards, another is responsible for the assessment of those senior students who choose to participate in the authority's varied qualifications, another is responsible for the evaluation of schools. Teacher training is provided by Colleges of Education and training is one of the requirements for appointment to a school. Schools are also supported by Regional Offices of the Ministry of Education.

Secondary schooling in New Zealand usually begins at about 13 years of age (Form 3) and continues for five years (Form 7), but in the past only a small percentage of students completed five years. This is changing because of the high rates of unemployment and the decline of the number of unskilled jobs. There is no longer the range of income-earning opportunities for the under qualified and the under-skilled.

Because of the challenges of growing numbers of senior school reluctant learners, of a high number of Maori (the indigenous ethnic minority) "failures", of staff dissatisfaction with the heavy examination-orientation of the courses which the school offered and with the new freedoms possible in the reformed national framework, a total-school reform was started which is now described. It has taken two years so far and all involved see positive change as a continuing feature of the school; that is, there is no "end" to this approach because students' needs change, future concerns will change, the school's resources will change and so on.

The approach used for the school reform illustrates Design A thus:

A. Desired Aims: The likely future for the students; what would they need as adults?

B. Process: How to ensure that the school worked in the best possible way for students?

C. Resources: What human and material resources already existed to help with the work?

D. Past and Present: What other aspects needed to be considered; what was important to Whangarei and New Zealand; what challenges and choices did the school reform have?

E. Evaluation: How to evaluate each action taken and also how to have a full evaluation of the entire reform?

A. Getting Started : Desired Aims

An all-day meeting of the parents, staff, some students and other interested people decided upon future concerns and what students might need in that future. As well, two "action" decisions were taken and these are shown in the Action boxes.

1. The Future

(a) The value of, and value in, the individual

(b) People interdependence

(c) Peace

(d) Growth of knowledge

(e) Technology

Action : 1a, 1b, 1c

| School Peace Rule: Courtesy, Consideration Co-operation For staff and students |

To 2

2. Imperatives for Adults

(a) Personal development

(b) Social interaction

development

(c) Global concerns

conservation

conflict

(d) Employment for Income

(e) Leisure

Knowledge and e.g.	Attitudes and e.g.	Skills e.g.
(a) Cognitive, Physical	creativity initiative	anger control rational risk-
(b) People and their life-practices	autonomy flexibility	taking making mistakes
(c) Causes, Solutions?	self-discipline tolerance	analysis synthesis
(d) Choices, Experience		
(e) Choices Experience		

Action : all of 2

3 basic aims for students
- a sense of self-worth
- a concern for others
- a desire to keep learning

To 3

B. The Process - The school as the site and focus of Reform.

The major part of the reform was left to the school's Board of Trustees, the Principal and staff. Some basic principles were, however, agreed upon:

(a) The school was to have no mixed messages for students (e.g. teach democracy but the school organization stays undemocratic).

(b) Student access and participation had to be more than just to buildings or classes. It had to be to learning opportunities to meet their own particular needs (such as extending students with special abilities).

(c) Learning opportunities had to meet the learning styles and speeds of students, had to be consistent with their ethnic and cultural backgrounds and had to be as equitable as possible.

(d) Quality and excellence for students had to be the basic guide, to close the gap between teaching and learning and to ensure that reconstruction of the reality which students do in school is soundly based.

(e) All aspects of the process of reform had to be integrated, with no piecemeal solutions to challenges. For example, all policies

and their resulting practices had to be consistent with each other.

Some of the components of the reform are now shown. There are many more (for example the school facilities reform process is only briefly described) but the aim here is to show the process of reform in action. The boxes indicate precise reforms.

The two major changes in the process were:

(a) in the management structure, from a hierarchical to a corporate, democratic system, and;

(b) in the curriculum, from year long learning blocks with norm-referenced assessment to six-week learning blocks with achievement based assessment. This second change also required a new form of student guidance and a more detailed record of students' school profiles.

B. The school as the fosuc and the site of reform (The Process)

3. The basic school organization

(a) Governance : Trustees from the community
(b) Management : Principal, staff
(c) Administration :

} set school philosophy policies practices

Action : for all of 3

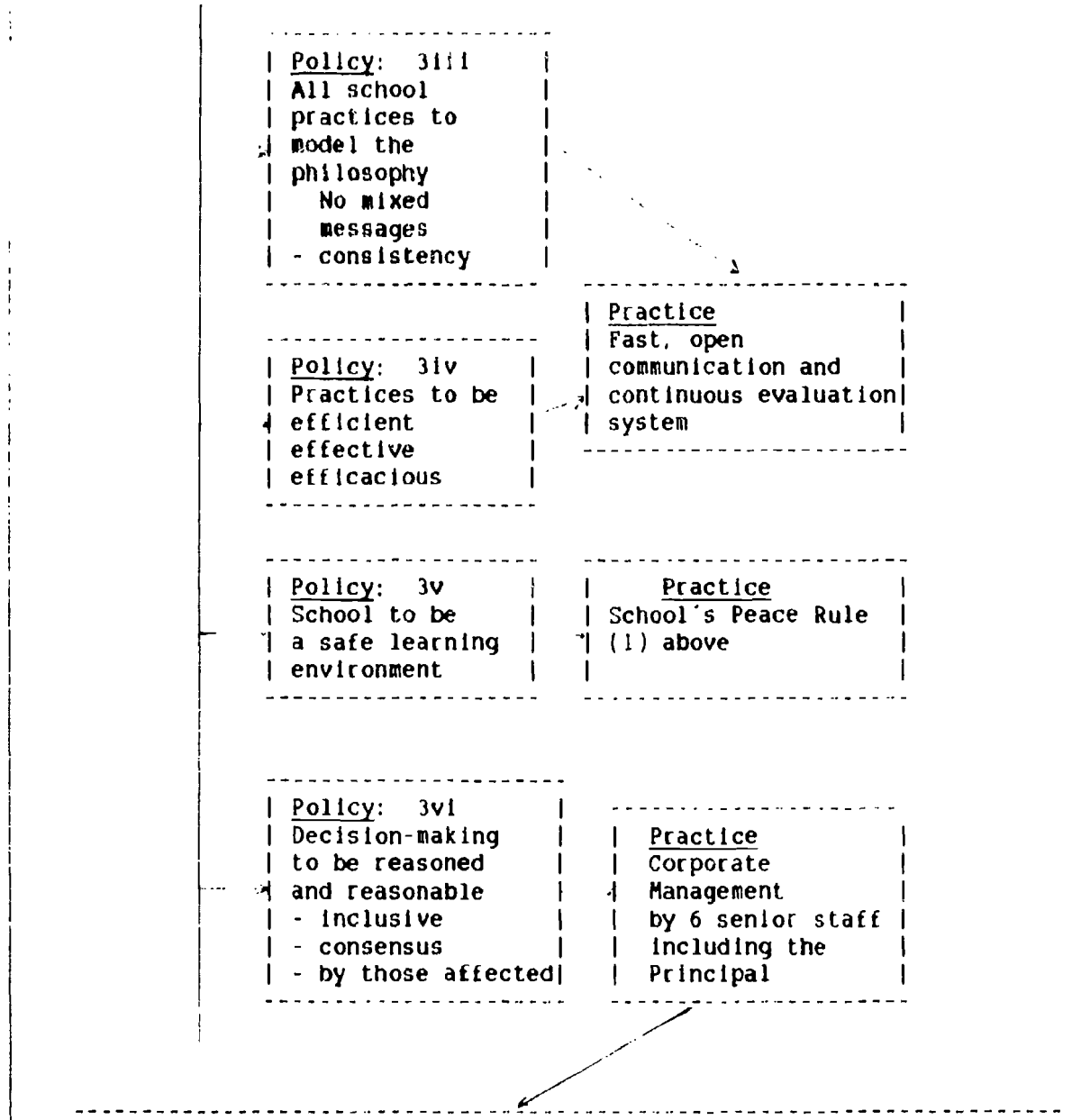
School Philosophy:
- Tukua O Punga, (Lay Your Foundations) for equality, quality and relevance in the school

Policy: 3i
The school is for all learners

Practice:	
adults	students
disabled	joined
push out	the
drop out	school

Policy: 3ii
Excellence in all things and celebrate excellence

Practice
in the media
in letters home


Policy: 3iii
All school practices to model the philosophy
No mixed messages
- consistency
Policy: 3iv
Practices to be efficient effective efficacious
Practice
Fast, open communication and continuous evaluation system
Policy: 3v
School to be a safe learning environment
Practice
School's Peace Rule (1) above
Policy: 3vi
Decision-making to be reasoned and reasonable
- inclusive
- consensus
- by those affected
Practice
Corporate Management by 6 senior staff including the Principal
Day to Day Operation
Extra Curricular
Curriculum Assessment
Facilities
Staff Guidance
Student Guidance
Committees in each - free choice by all staff.

To 4

4. Staff - Teaching and Support

(a) Personal qualities

(b) Retraining

(c) Guidance

Action: (4a)

Trustees' training in selection of staff

Action 4b

Staff Development Committee - identify needs - provide learning opportunities

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Needs List e.g. Knowledge Attitudes Skills Content Autonomy Teaching Strategies For 1991 : All staff - writing, assessing modules - learning to use computers

To 5

5. Curriculum and Assessment

(a) School Philosophy of Equity, Quality, Relevance [3]

(b) School Policies e.g. 3iv of efficiency, effectiveness and efficacy

(c) Future Adult Imperatives in [2]

(d) Requirements of National Curriculum.

Action 5a

Policy:
Equity: ethnic, cultural, gender needs
Quality: learning styles, speeds; close teaching-learning gap
Relevance: guided free choice by students

Action 5-3iv

Policy:
Efficiency: shorten time frame for each unit of learning
Effectiveness: timetable after students' selection
Efficacy: clear learning outcomes : clear learning strategies : criterion reference assessment : fast feedback of learning achievement

Practice
Modular Studies
- 6 week blocks
- achievement-based assessment
- learn by ability, not age

To 6

Practice: Advisory Committee for Students - core/compulsory areas - not all "easy" choices - advice for talented

Practice computerised student profiles (learning records)

6. Facilities

(a) maintenance, repairs, redecoration

(b) room usage effectiveness

(c) provision of school and teaching equipment

(d) community resources

Action : 6

School Facilities Plan - priorities - bargain-hunting - students' care of facilities - community help - brighten up rooms, grounds

To 7

C. Resources

When existing resources were examined a number of points quickly became clear:

a) The staff were willing to work for reform and had many creative suggestions.

b) Students' needs were many and of priority were the needs generated by students from low-income families and Maori students.

c) The Ministry of Education would not give any extra funding for reform; all changes had to be done within the existing budget.

d) The curriculum needed major changes in content, teaching strategies and student assessment.

e) School buildings were sufficient but run down and teaching materials and technologies were too few.

f) The school community was very willing to help with a little money and with work (such as painting walls). There were many other resources in the community which the school could use to help students. Of particular importance were all the workplaces for work experience for students. This meant that the school could be comprehensive in its approach, offering both academic and vocational education.

C. What are our resources?

7. Existing

(a) People - Staff
- Students

(b) Curriculum

(c) Facilities buildings
equipment
materials
technology

Action: 7a

Student Analysis
showed: 78% Poor families
44% Maori
50% Girls
and: - violence in families
- reluctant learners
- many talented

Action 7b

Curriculum Analysis
- highly examination oriented
- teaching overlaps
- learning gaps

Action 7c

Facilities Analysis
- run-down
- inadequate
- insufficient

(d) Regulations - permitted school-based reform

(e) Finance - no extra money from the government

(f) Community

(a) Workplaces

(b) Natural resources — city, sea, land

(c) Parents

(d) Specialists — culture, sport, work

(e) Research

(f) Media

(g) Primary and Tertiary

Action 7f (a)

Parents campaign
- explain changes
- seek support
- media coverage

Action 8a

Vocational Education
- all students to learn
- work skills
- all students to have time in community workplaces

D. Past/Present

When the community meeting (described in A above) discussed future concerns and the desired student competencies, they referred often to aspects of the past and present of New Zealand and of Whangarei. The challenges for the school reform were clearly identified as:

(a) development of all students' to their potential;

(b) from this, hopefully, to meet specific New Zealand challenges of crime, ethnic minority deprivation and very low economic development in the whole country. The options available for the reform process were many but an integrated approach which centred on students was the one agreed upon, particularly as the reformed national framework enabled the school to make quite major changes in its methods of operating.

8. Past

(a) history
(b) traditions
(c) cultures
(d) beliefs, etc.

Action 8c

Maori Culture
- to be integrated wherever possible
- community leaders to be involved

Present Challenges

(e) social - crime
(f) economic - national recession
(g) political - basically sound
(h) technological - modern

Action 8(e)

- School
- Peace
- Policy

Future Options

(i) National philosophy - justice for all

(j) National laws in state of change

(k) Constitution no written one

(l) Reformed education framework school-based change possible

Action 8(i)

Individual Development
- student needs to be central to all reforms
- Actions 2, 3i, 5

E. Evaluation

It was agreed that ongoing evaluation for feedback was very important to protect students' interests. It was accepted that at times mistakes would be made, but that these were acceptable because continuous evaluation would quickly rectify them. Illuminative evaluation was to be used as a part of the formative evaluation because it looks carefully at process and what it is like for people in the process.

9. Kinds of Evaluation

a) formative

b) summative

Action 9(a)

Formative
- Practice of 3iii (staff evaluation)
- Parent surveys
- Student surveys

Consequence of The Reform Process
- Many other schools visiting and evaluating

Action 9(b)

Summative
- by central authority responsible for school evaluation

Conclusion

The developmental reform process described has meant hard work. It has, however, been exciting and encouraging for staff. Parents and students are also enthusiastic. The school is now being recommended as a model by central education authorities. The design is flexible and able to meet changing times and needs. It is relatively cheap in that most aspects of the reform are to do with policy and practice rather than the provision of materials. Above all, it is totally student-centred, with human development as its focus.

The design requires community courage to make major changes, staff goodwill to work for the changes and educational leaders' (administrators and Principals) willingness to allow the autonomous creativity of staff and students in the reform process. Tikipunga High School is not perfect but it is working in a new way for its students and already the signs are positive that this process of developmental reform is a useful approach to promoting human development.

ANNEX I

AGENDA

1. Inaugural session

2. Election of officers and orientation of the Meeting

3. Presentation of country reports on the state-of-the art of secondary education:

   - restructuring of secondary education

   - Joint Innovative Project (JIP) on raising the quality of learning of secondary school students

4. Co-operatively develop alternative designs of secondary education for human resource development (HRD)

5. Consideration and adoption of the report of the Meeting.

ANNEX II

ADDRESSES

Address of Dr. Kowit Vorapipatana, Director-General, Department of General Education, Ministry of Education, Thailand

Your Excellency the Governor of Surat Thani Province,
Mr. Hedayat Ahmed, Director, UNESCO Principal Regional Office,
Dr. de la Cruz,
Ladies and Gentlemen,

I am very glad that UNESCO PROAP is organizing this meeting which enables several secondary school educators to assess the situations of secondary education, and to suggest for consideration ways to improve the existing systems as well as secondary schools in our respective countries.

I would like to share with you what I have observed and experienced about secondary education and secondary schools in my country. The picture is not encouraging. I believe that the situation of secondary education in several other countries represented here is not much different from ours.

I have found that most of our teachers think that secondary school students are just children who are too young to do anything. They are too young to be given any responsibility. As soon as elementary school pupils enter secondary schools, many of them stop working for their families. The only thing students are expected to do is to study. It is strange that parents of disadvantaged families are the worst when it comes to the question of working and earning while learning. These adisadvantaged parents would do anything to ensure that their children spend their time only in studying.

I have found that many parents do not let their children go to secondary schools because they think that secondary schooling makes these children lazy and too weak to cope with everyday problems.

I have found that the northeastern people would sell their land to be able to send their children to secondary schools. The parents have to work for somebody else in order not to make their children work, but only study. I have found that those who study at universities never earn a single Baht in the whole year, while their old parents work so hard to send money to them to study.

I have found that in a class of 40-50 students in a secondary school, perhaps only five will really enjoy the maximum benefit from the school. The rest are merely supporters to make up the required number in order to open a class. What I mean is that although all these students study the same courses as if they will all become doctors, engineers, teachers, etc., only about five of them will eventually be the lucky ones to fulfil their aspirations, while the rest - the majority - will return to

work in the farms.

My Department is responsible for 2,000 secondary schools, with two million sturdy young men and women who have all the brain, creativity and energy that can be tapped. We also have about 24,000 acres of land, with plenty of facilities and equipment. We have 100,000 teachers with degrees. These students, teachers and facilities together constitute a considerable potential, an organized force, a pool of human and material resources. They should be given opportunities to be socially useful and economically productive. For the students, such opportunities would also make them better students. Their productivity may be competitive of whatever is produced by those outside the schools.

I have found that I can explain about the project " work while you learn, earn while you study" and get endorsements much more easily from those who have not been trained in the field of education than from those in the education sector itself.

Finally, I am convinced that the word "to prepare" or "to train" will have to be considered because if the school is expected to "prepare" or to "train" the young for life in the future, it may mean that what the children learn at school is not applicable or relevant to the present-day life. Education must respond to both the present and the future life.

It is my hope that this Meeting will come out with concrete operational plans for implementation, rather than being merely a theoretical or academic exercise.

Thank you.

Address of Mr. Anu Sanguannam,
Governor of Surat Thani Province

Honoured Participants and Distinguished Guests,

It is a great honour for me to have this opportunity to welcome to Surat Thani Province the honoured participants in this Regional Review Meeting to assess achievements in the orientation and reform of secondary education.

Surat Thani is southern Thailand's largest province, covering an area of about 12,890 square kilometres. It is made up of 18 districts and it has a population of 784,308.

Surat Thani Province has beautiful beaches, loveliest tropical islands, plains and highlands, prosperous crops, minerals, sea resources, animal raising, tourism, good trade and industries. It is very good for investments. Its motto is Roi Koh, Ngoh Arol, Hoi Yai, Khai Dang, Laeng Dharma.

Roi Koh. There are hundreds of beautiful islands especially Koh Samui, Koh Phangan and Angtong Islands.

Ngoh Aroi. It is the Rongrien Rambutan from Ban Nasarn District. The flesh is luscious and crispy. Now the Rongrien Rambutan trees are grown all over Surat Thani Province and Thailand.

Hoi Yai. Surat Thani's oysters are outstanding because of their sizes and pure white meat, somewhat sweet to eat, with no fishy smell, and high in value as food. The oysters are mostly bred in Kanchanadit District.

Kai Dang. It refers to the salted egg of Chaiya District. The salted egg is well known because its yoke is thoroughly reddish yellow and it tastes very delicious. The eggs are prepared in Chaiya District.

Laeng Dharma. It is Wat Suan Mokkha Phalaram, of which Buddhadhasa Bhikkhu is the founder and abbot. He is well known and accepted for his practical teachings, not only in Thailand but all over the world.

Surat Thani Province was once an ancient city. Archaeological discoveries at Tachana District, Chaiya District, and Wiangsra District manifest the Srivichaya Empire's splendour. Moreover, Surat Thani Province was the route of The Silk Road which connected Asia, the Middle East and Europe both by land and by sea. It was the trade route. The merchants exchanged goods such as silk cloths, chinaware, decorations, precious metals and stones, spices, and forest goods. They used the Silk Road for transportation, communication, and exchange of cultures between the two worlds.

Surat Thani Province was a part of history and civilization of the world. It used to prosper for a long time. The archaeologists found antique objects, Buddha images in the Kupta style at the ancient Wiangsra city, Pra Vishnu at Chaiya District, chinaware, and bronze mirror at Lam Pho Chaiya City. It was a very good evidence of prosperity of the trade route in the past. In addition, the trade route by sea passed through Punpin City also. The Silk Road showed us the prosperity in the past and it should be studied.

For the reasons above, the tourist business in Surat Thani is an important source of income because Surat Thani has plenty of attractions, for example:

KOH SAMUI. It is the island of lovely white sand beaches and almost literally an island of coconuts. The transportation is convenient and safe.

KOH PHANGAN. The island offers privacy on beaches, steep and high mountain ranges, and forested hills with scenic waterfalls.

ANGTONG ISLANDS. Most islands comprise, coral reefs, limestone masses, fringed by beaches and tropical rain forest, caves and rock formations. The park office is on Koh Wua Talap where bungalow-style

accommodation is available.

CHAIYA DISTRICT. There are several ancient buildings, art, cultures, and Buddhist sites.

- PHRA BOROM THAT CHAIYA. The revered elaborately restored, more than 1,200-year-old pagoda contains Buddha relics and is a direct link with the Srivichaya Empire.

- PHUMRIANG'S SILK CLOTH. Phumriang Village is an art and craft centre well known for its gold and silver brocade silk cloth and jute headwear.

- RATCHAPRAPA DAM It has the most beautiful view in the south, and attracts visitors during public holidays.

- THE KHAO TAPET NATURE AND WILDLIFE CENTRE. The centre houses several of caged wild animals. The hilltop offers panoramic views of Bandon municipality. Phra That Si Surat is also on the summit of Tapet Hill. It houses Buddha relics donated by the Indian Government some 30 years ago.

In addition, there are national parks such as Khao Sok National Park, Nong Tungtong Wildlife Reservation, and temples which show how prosperous they used to be in the past. I would like to invite you to see the places I have mentioned above.

The Regional Review Meeting to assess achievements in the orientation and reform of secondary education is very useful for the administration education. Education in Surat Thani administered according to the 6th Educational Development Plan, policies of the Ministry of Education Policy, the Department of General Education and the objectives of the curriculum, which can be summarized as follows:

Lower secondary school administration : The objectives are to enable students to develop their lives, and further their education. They can help the society according to their abilities. They act as good citizens of the democratic government under the constitution monarchy. They can work with others happily, improve their work, themselves and the society.

Upper secondary school administration : The objectives are to enable students to develop their intelligence, have knowledge of specific skills individually. They know how to earn their living, develop the society and are useful to the society.

The administration of the education must consider the 3 qualities of human resources. These are thinking thoroughly, using strategies, and adapting themselves according to the changing world especially the skills and the ways of thinking, planning, working, presenting and evaluation.

The most important of the administration of education is that it should be student-centred. The atmosphere and good surroundings affect students. Good schools must not be isolated from the community. The

objectives must emphasize morals, advise on occupations, promote science, technologies, music, sports, religion, art and culture. The students must learn about the AIDS, genrate their own incomes in groups, be members of school co-operative stores, be salesboys and salesgirls, help one another to grow trees, develop activities of boy scouts, girl scouts, girl guides, know their library and how to use it, learn science and technology and how to adapt them in the daily life, give a chance to Matayom Suksa 1 students to further their education, support poor students, make known their work and schools, take care of one another, support students to set up mini companies, and advise students to exercise everyday.

Currently the numbers of secondary schools in Surat Thani are as follows:

a) 39 schools under the Department of General Education;

b) 28 schools under the Office of the National Primary Education Commission;

c) 6 schools under the Office of the Private Education Commission;

d) 1 school under the Department of Teacher Education.

The total number of secondary schools is 74.

I am sure that the Meeting will be very useful to secondary education, particularly in seeking ways to administer secondary education efficiently, and for the students.

Finally, I wish you good health, good luck, and success in fulfilling the objectives of the Meeting.

Thank you very much.

Address of Mr. Hedayat Ahmed, Director,
UNESCO Principal Regional Office for Asia and the Pacific

Honorable Mr. Anu Sanguannam, Governor of Surat Thani Province;
Dr. Kowit Vorapipatana, Director-General, Department of General Education, Ministry of Education, Thailand;
Distinguished Resource Persons, Participants and Observers;
Ladies and Gentlemen;

It seems paradoxical that while there is a general recognition of the strategic importance of secondary education, which in this Meeting is all embracing of the second level of education, i.e., lower and upper secondary education, in most countries of the region, if not the whole world, secondary education remains the weakest link in the educational chain. It is a weak chain linking primary and tertiary education, adversely affecting both.

It is to be noted that in the countries of the region enrolment at the secondary stage has increased substantially, i.e., between 1960 to 1980, there was a 300 per cent increase. Between 1970 to 1982 alone, enrolment increased by 153 million. Furthermore, in more and more countries of the region, basic education is being extended up to at least the lower secondary school level. However, in many countries, it appears that access to the second level of education is inversely related to quality education. There are concerns that many secondary students are finding it more and more difficult to be admitted to universities, by simply relying on what the secondary schools per se have to offer. Well-to-do parents have to hire tutors to prepare their children for university entrance examinations. For the children of the poor, there seems to be very little hope for upward mobility through university education, and the gap between the rich and the poor will widen further, which is already an explosive social phenomenon in some countries in the region.

And for those who succeed in gaining berths in universities, there is a proliferation of students in the humanities, social sciences, arts and languages, as very few youngsters are sufficiently equipped for courses requiring proficiencies in the natural sciences and mathematics. Hence, in many countries, there tend to be so many unemployed university graduates, and yet acute shortage of graduates in science and technology, including engineering, management, medical and health sciences, etc. The developing countries are bound to be left even further behind if they do not keep abreast with the development of science and technology. If the south do not exert efforts to develop their capacities in science and technology, they will become even more vulnerable and dependent on the north than now.

In the context of developing countries, a more serious shortcoming of secondary education is its inability to adequately prepare the youth for life, e.g., the world of work, despite the reality that in most countries the vast majority of secondary school graduates are unable to go for tertiary education. For instance, among the countries represented in this Regional Meeting, the gross tertiary enrolment ratio in 1986-88 is less than 5 per cent, for example, in Bangladesh, Nepal, Pakistan, Papua New Guinea and Sri Lanka, and less than 10 per cent in India, Indonesia and Malaysia. Of course the gross tertiary enrolment ratio is much higher for Mongolia (21.70 per cent), Japan (28.2 per cent), New Zealand (36.35 per cent), and Philippines ((37.9 per cent). Unfortunately, data are not available for the Republic of Korea and Thailand, which presumably are high.

Please note that for those countries with less than 5 per cent enrolment ratio at the tertiary level, the gross enrolment ratios at the secondary level are quite high, e.g., China (43 per cent), Iran (48 per cent), and Sri Lanka (69 per cent). I do not wish to overwhelm you with statistics. More of that are in the working paper prepared by the Technical Working Group. One can therefore conclude that for the vast majority, secondary education is the last stage of formal schooling. As such, it must necessarily prepare the youth for the world of work and for life. Unfortunately, there are evidences in many countries that secondary education has not been able to do that. This has contributed to unemployment and under-employment problems, as well as other social

problems among the youth, including alienation, drug addiction, and even criminality. They have become liabilities rather than assets to the society, and thus contributing further to incidence of poverty, which is very serious among the developing countries. The World Bank's World Development Report 1990 revealed that over one billion people in the developing world are living in poverty, of which 46.4 per cent are in South Asia and 25 per cent in East Asia, or a total of over 700 million people. The World Bank report defines poverty as the inability to attain a minimal standard of living, e.g., those whose income is below US$370 per annum. Those who live under conditions of absolute poverty and those unable to even have basic necessities of life (i.e. with an income of below US$275 per annum) number about 630 million in 1985, and most of them are also in the Asian region. The report noted that the burden of poverty is spread unevenly - among the regions of the developing world, among countries within those regions, and among localities within those countries.

There are convincing evidences that an investment in human resource development is one of the keys to reducing poverty, thereby fostering development, and enhancing people's quality of life. Obviously one of the best ways to harness the human potential is through education, along with the improvement of health and nutrition. Studies have consistently shown that educated farmers are more likely to adopt new technologies, and get higher returns on their piece of land. It has also been shown that more education gives the workers a wide range of employment options.

However, there is a disturbing element about the performance of the second level of education. The 1990 World Bank report pointed out that the average social returns of secondary education is only about 15 per cent in Asia, as compared to 27 per cent for primary, although that of higher education is even lower at 13 per cent. The social returns of secondary education will remain dismal if we do not invest towards the technological improvement of secondary schools. This to my mind is long overdue in the context of the rapidly changing technological society that we are living in a phenomenon that can only accelerate at the threshold of the twenty-first century.

Modernizing vocational and technical education at the secondary school level is a very expensive proposition, which many developing countries can ill afford. However, it should be noted that in 1986 the defence expenditure of developing countries amounted to US$150 billion. In 1990 the same was estimated at US$950 billion, of which developing countries account for 20 per cent, or about US$190 billion.

If even only a third of it could be re-channeled to education, including secondary, we could, among other things, revitalize the weakest link of the education system. There are of course encouraging signs that such is possible. The Stockholm International Peace Research Institute indicated decreasing defence expenditures, including declining importation of arms by Third World countries. A trend towards "farewell to arms" looms in the horizon of most nations, which is most welcome development not only for the resources that could be re-channeled for socio-economic development, but for attaining peace which has been elusive in many parts of the planet earth.

Someone said, "Serious illness calls for drastic surgery". Is this the case with secondary education in the region? If it is true that secondary education is turning out youth ill-prepared for tertiary education or ill-equipped for the world of work or life itself, then drastic surgery may be required. In a hospital setting, whenever a mind-boggling case is at hand, doctors hold a conference to jointly study alternative courses of action for the case. That, I believe, is why we are holding this Meeting - to analyse the ailments plaguing of second-level education. I urge you to be willing to talk about our failures in secondary education, or we will never have any big success towards revamping it. But more important, we should jointly create and develop innovative and alternative second-level education schemes. The advise of Alexander Graham Bell is, I think, relevant at this juncture. He said, "Leave the beaten track occasionally and dive into the woods. You will be certain to find something that you have never seen before".

I sincerely think that the "beaten track" of partial, ad hoc, linear, piece-meal, polarized remedies, should be abandoned. Instead we should resort to a more massive system-wide reform, which takes into consideration realities in the region, including the fact that (i) five or six years of education is not enough for the youth to shoulder responsibilities of the envisaged modernization and its corresponding socio-economic development; (ii) there is an increased social pressure to veer away from elitist to one of widened access to the second level of education; (iii) second-level education is not merely a preparation for tertiary education, but for life; (iv) secondary education is expected to provide a pool from which the bulk of skilled manpower for national development has to be selected; (v) it is at the secondary stage that its clientele is at a level of maturity demanding application of principles and theories they learn; and (vi) a stage when they are likely to firm up what they want to be in the future.

What we need to look for more than ever is a secondary education that can contribute optimally to human resource development. Whether going to university or joining the world of work and life, we need young women and men imbued with humanistic, ethical and cultural values equipped with scientific knowledge, saleable technical skills, creative and innovative capabilities, and who not only contribute to national development, but have the potential to optimally benefit from the outcomes of development.

John Naisbitt and Patricia Aburdene, in their book, Mega Trends 2000, talk about 10 major changes in our lives and the world at the threshold of the twenty-first century. Let us hasten to add an eleventh one, i.e., "renaissance of secondary education". And let it be said that the movement was conceived in the 1991 Surat Thani Regional Meeting on Secondary Education. Let us jointly develop a vision about secondary education. This is a challenge to us, all and I trust that we will face up to the responsibility vested upon us.

I wish the Regional Meeting great success!

ANNEX III

LIST OF PARTICIPANTS

A. Participants

CHINA (People's Republic)	Mr. Bai Hongsheng, Vice-Director, Educational Research Institute of Shanxi Province, No. 9, Dongtoudaoxiang, Jiefang Road, Taiyuan, 030009 Shanxi Province
	Mr. Wang Hongjie, Assistant Researcher, Educational Research Institute of Shanxi Province, No. 9, Dongtoudaoxiang, Jiefang Road, Taiyuan, Shanxi Province
INDONESIA	Mr. H. Pangaribuan, Chief of Curriculum Section, Directorate of Secondary Education, Ministry of Education and Culture, Jakarta
IRAN (Islamic Republic of)	Mrs. Farokh-Lagha Raeis-Dana, Responsible for Research and Evaluation of Educational Content, Organization of Research and Curriculum Planning, Ministry of Education, Teheran
MALAYSIA	Mr. Tan Poh Boo, Senior Assistant Director, Curriculum Development Centre, Ministry of Education, Persiaran Duta Off Jalan Duta, 50605 Kuala Lumpur
MONGOLIA	Mr. Sharyn Havjgai, Director of Methodology Centre for Secondary School Teachers, Ministry of Education, 27650 Ulan Bator
NEPAL	Mr. Gopi Nath Sharma, Joint Secretary, Ministry of Education and Culture, Kathmandu
PAKISTAN	Dr. M.A. Bhatti, Joint Educational Adviser, Federal Institution Wing, and Director-General, Federal Directorate of Education, Ministry of Education, Islamabad

PAPUA NEW GUINEA	Mr. John Maela, Secondary School Inspector, Department of Education, Boroko, Port Moresby
PHILIPPINES	Dr. Desiderio Rex, Director, Region IV, Department of Education, Culture and Sports, Quezon City
REPUBLIC OF KOREA	Dr. Yong-mok Park, Director, Department of Korean Language Education, Korean Educational Development Institute, Seoul
THAILAND	Mr. Banchong Pongsastra, Deputy Director-General, Department of General Education, Ministry of Education, Bangkok
	Mrs. Arreerat Wattanasin, Curriculum Specialist, Head of the Vocational Curriculum Development Section, Curriculum Development Centre, Department of Curriculum and Instruction Development, Ministry of Education, Sukhumvit Road, Prakanong, Bangkok 10110
VIET NAM (Socialist Republic of)	Dr. Nguyen Minh Duong, Director, Department of Vocational and Secondary Technical Education, Ministry of Education and Training, Hanoi

B. Observers

THAILAND

1. Mr. Manoch Parnto, School Director, Surasakmontri School, Bangkok
2. Mr. Seri Lacharojana, School Director, Sam Sen Witthayalai School, Bangkok
3. Mr. Suthi Pengparn, School Director, Suan Kularb Witthayalai, Bangkok
4. Mr. Nikom Bodhipet, School Director, Baan Na Witthayalai, Baan Na Derm District, Surat Thani
5. Miss Wanida Manaspaiboon, Head, Regional Supervisory Unit, Region 5, Rajaburi
6. Mr. Tawil Martliam, Head, Regional Supervisory Unit, Region 11, Korat

7. Mr. Danai Diryabutta, Supervisor, Supervisory Unit, Bangkok

8. Miss Chongkolnee Naksomboon, Supervisor, Supervisory Unit, Bangkok

9. Mr. Chaipot Rak-ngarm, Supervisor, Regional Supervisory Unit, Region 2, Yala

10. Mr. Prasert Bandhisak, Provincial Supervisor, Nakorn Srithammarat

11. Mr. Chaiwat Trakoolsoontorn, Head, Regional Supervisory Unit, Region 1, Nakorn Pathom

12. Miss Chintana Nuttatas, Supervisor, Regional Supervisory Unit, Region 3, Songkla

13. Mr. Channarong Sangsawang, Head, Regional Supervisory Unit, Region 7, Phitsanulok

C. Resource Persons

INDIA	Dr. T.N. Dhar, A. 60, Yojana Vihar, Delhi-110092
JAPAN	Mr. Nobuya Higuchi, Chief, Section for International Co-operation in Research, Department of International Education, National Institute for Education Research, Tokyo
NEW ZEALAND	Mrs. Edna Tait, Principal, Tikipunga High School, P.O. Box 7041, Tikipunga, Whangarei
THAILAND	Dr. Kowit Vorapipatana, Director-General, Department of General Education, Ministry of Education, Bangkok

D. United Nations Educational, Scientific and Cultural Organization (UNESCO)

UNESCO Principal Regional Office for Asia and the Pacific (PROAP), Bangkok

Mr. Hedayat Ahmed, Director

Mr. Leonardo de la Cruz, Head, Asian Centre of Educational Innovation for Development (ACEID)

Miss Charatsri Vajrabhaya, Programme Specialist in Educational Innovation, ACEID

E. Organizing Committee

The Supervisory Unit, Department of General Education, Bangkok

Dr. Akom Chantasoontorn, Head of the Supervisory Unit

Mr. Pragas Sangpet, Assistant Head of the Supervisory Unit

Mr. Manop Galadee, Supervisor

Mrs. Somtawin Srichantuk, Supervisor

Mrs. Sumon Tiansawang, Supervisor

Miss Nongyao Korsanan, Supervisor

Mr. Anake Yamban, Supervisor

Mr. Wirat Klansuwan, Supervisor, Regional Supervisory Unit, Region 3

Mr. Supote Penchamrush, Supervisor, Regional Supervisory Unit, Region 3

Surat Thani Province

Mr. Cherd Kongtong, School Director, Surat Thani School

Mr. Saluay Larpchoorat, School Director, Surat Phitthaya School

Mr. Kowit Nuankhao, School Director, Kanchanadit School

Mr. Surapong Satianpongprapa, Teacher, Surat Thani School

Pattalung Province

Mr. Teeratat Yingdamnoon, School Director, Pattalung School

Mr. Sawat Maneenil, Principal of Phabon Phitthayakom School

Mr. Chaleo Pongsapan, Principal of Don Salanum Witthaya School

ANNEX IV

MEMBERS OF THE WORKING GROUPS

Group A

1. Dr. M.A. Bhatti (Pakistan) - Group Chairperson
2. Mr. Gopi Nath Sharma (Nepal) - Group Rapporteur
3. Mr. Bai Hongsheng (China)
4. Mr. Wang Hongjie (China)
5. Mrs. Farokh-Lagha Raeis-Dana (Iran)
6. Mr. Banchong Pongsastra (Thailand)
7. Mrs. Edna Tait (Resource Person)
8. Mr. Nobuya Higuchi (Resource Person)
9. Miss Charatsri Vajrabhaya (UNESCO)

Group B

1. Dr. Desideria Rex (Philippines) - Group Chairperson
2. Mr. Tan Poh Boo (Malaysia) - Group Rapporteur
3. Mr. H. Pangaribuan (Indonesia)
4. Mr. Sharyn Havjgai (Mongolia)
5. Mr. John Maela (Papua New Guinea)
6. Dr. Yong-mok Park (Republic of Korea)
7. Mrs. Arreerat Wattanasin (Thailand)
8. Dr. Nguyen Minh Duong (Viet Nam)
9. Dr. T.N. Dhar (Resource Person)
10. Dr. L. de la Cruz (UNESCO)

The Asia and Pacific Programme of Educational Innovation for Development (APEID) has as its primary goal to contribute to the building of national capabilities for undertaking educational innovations linked to the problems of national development, thereby improving the quality of the people in the Member States.

All projects and activities within the framework of APEID are designed, developed and implemented co-operatively by the participating Member States through nearly 200 national centres which they have associated for this purpose with APEID.

The 29 Member States participating in APEID are Afghanistan, Australia, Bangladesh, Bhutan, China, Democratic People's Republic of Korea, Fiji, India, Indonesia, Iran, Japan, Lao People's Democratic Republic, Malaysia, Maldives, Mongolia, Myanmar, Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Samoa, Socialist Republic of Viet Nam, Sri Lanka, Thailand, Tonga, Turkey and Union of Soviet Socialist Republics.

Each country has set up a National Development Group (NDG) to identify and support educational innovations for development within the country and facilitate exchange between countries.

The Asian Centre of Educational Innovation for Development (ACEID), an integral part of the UNESCO Principal Regional Office for Asia and the Pacific in Bangkok, co-ordinates the activities under APEID and assists the Associated Centres (AC) in carrying them out.

In the fifth cycle of APEID (1992-1996), three major programme areas have been selected by the Member States at the Twelfth Regional Consultation Meeting on APEID (August 1990) for the purpose of concentration. These are:

1. Universal primary education
2. Reorientation and qualitative improvement of secondary education (including general education and technical/vocational education)
3. Science and technology education (including Science for All, mathematics, and information processing).